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Is Corporate Governance Policy a New Paradigm for Social Responsibility? A Research Agenda from Ghana

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Abstract

Social responsibility has received great authorial comments on making business commitments compensatory for corporate profits and/or rent-seeking in host communities. Unfortunately, that voice remains silent on the fundamental component of business responsibility and its improvement, i.e., governance policy. The paper, consequently, recommends a corporate policy for equitable and compensatory corporate citizenship in local communities. To justify the proposition, three objectives are established: proof that social responsibilities can improve with a governance policy, that authoritative policy represents a crucial change in social initiatives execution, and that policy absence incentivises implementation ineffectiveness and commitments paucity. Triangulation of interviews and survey data through SPSS analysis shows statistically significant coefficients validating the claim that corporate governance policy is an enrichment and facilitator of social responsibilities. The proposed policy framework will not only deliver competitive, scientific, objective, and excellent services but also represent a novel and future academic investigation.

Keywords: corporate governance policy, corporate citizenship, social responsibility, externalities

Introduction

Corporate citizenship has caught the corporate community's attention, giving rise to business interventions in stakeholder societies. Though enterprises claim to be fully embedded in the social responsibility agenda, the implementation of programmes effectiveness and commitments suitability has remained in doubt. However, business roles in society have continued to increase and shape corporate commitments for external stakeholder constituencies. In Ghana, multinational enterprises are seen to be virtuous corporate citizens, as reports indicate engagement in one or two social activities for host communities; a claim Visser (2011) agrees with as being true of a top few large companies that engage in social responsibility. Therefore, that growing voice in support of better treatment of stakeholder communities by businesses can be meaningful and heard when the fundamental difficulty, i.e., a governance policy absence, is addressed. Alas, corporate governance injunction, i.e., recognising shareholders' rights and protecting stakeholders' interests, falls short of a recommendation for a governance policy for social interventions. For instance, it is contended that corporate governance tools must ensure wealth creation and profit maximisation and respect for the external stakeholder constituencies' interest (Page, 2005).

Meanwhile, it is acknowledged that internal systems of control and organisational management objectives (Cadbury, 1992; Cadbury, 2000) constitute the main drivers of governance principles to inspire a business-specific policy to manage the social responsibility imperatives. As a precursor, the governance structures must be deployed and devoid of problematic human realities to bring about innovation, progress, and economic benefits to business operating environments, i.e., the stakeholder communities.

Moreover, business prosperity hinges on sound and specific policies; without which, it is impossible for the enterprise's objectives to be executed. Therefore, corporate responsibility without a governance policy will imply failure, which also reflects the construct's careless implementation (Devinney, 2009). Unfortunately, CR is determined largely by business management, based on what it perceives as being good for major stakeholder communities. It is this human problematic reality that deserves attention and which should be addressed via the policy gap. The novel policy agenda is proposed to replace the current self-regulation strategy for social initiatives and environmental accountability. The replacement is crucial because self-commitment of social responsibilities is ineffective, insufficient, and less compensatory for corporate excessive profits from local communities.

The wide-ranging reforms institutionalisation within business bookkeeping practices for corporate compliance (Sarbanes, 2002) begins a serious dialogue between governance and responsibilities, in that businesses are now seen engaging in corporate accountability and environmental responsibility. This observed transformation enforces strict governance practices involving ethics, accountability, and disclosures, thus making social obligation an institution of governance and prioritising social objectives in corporate entities' decision-making arenas. Therefore, as the failure of system rules contributes less to corporate collapse and with problematic human realities being culpable, a business governance policy coupled with respect for rules can play a major role in upholding business objectives and social accountability.

The paper views the governance policy as the new standard in corporate responsibilities administration. The policy domain is novel and has to be explored further to make community engagement and environmental responsibility complete and compensate for business externalities.

The literature's corporate benevolence characterisation, discussions, and treatment of CR has muted interest in transforming the construct, undermining commitments for and projects in stakeholder communities. The paper, therefore, seeks to answer and advance corporate citizenship innovation proposition through queries, such as "Can corporate governance policy incentivise improvement in business accountability and environmental responsibility?" and "Is the policy distinction robust to reduce ineffectiveness and inadequacies in initiatives implementation?"

Besides, the overarching goal is to proffer insights into the novel governance policy to incentivise enhanced social responsibility and environmental accountability. The specific objectives include proof that social responsibilities through corporate governance policies can improve, and the validity that governance policy represents a crucial change in corporate responsibility implementation and its absence promotes commitments and interventions ineffectiveness and insufficiency for stakeholder communities.

Governance is a broad field to consider in a study; therefore, that aspect dictating the making of a plan is pursued. The corporate governance policymaking is viewed from directors' effective oversight roles in creating room for social policy to emerge and to be observed by other management staff for effective and enhanced social undertakings. Policy entails strategies made by corporate bodies to govern social agendas. Interviews for field data are costly and, hence, create a small data sample for analysis.

Materials and Methods

Business Governance Construct

Enterprise governance is a supervisory board and management system (Cadbury, 1992; Cadbury, 2000) and includes the conveyer belt for transmitting systemic mechanisms plus that which facilitates monitoring efficiency and effectiveness (Yang, McDaniel, & Malone, 2012). Moreover, the organisation regulating aspect is also considered, which embodies agreement, accountability, and transparency in the laws (MacMillan, Money, Downing, & Hillenbrand, 2004). Page (2005), however, focuses on the corporate governance aspect, which involves sanitising rules and regulations, safeguarding shareholders' rights and stakeholders' interests through corporate wealth management.

Suffice to infer, therefore, that business governance provides the organisational theme that defines a power structure and makes decisions and internalises corporate culture among its workers. However, governance rules underpinning the corporate body, in themselves, are different from that which constitutes and/or guarantees responsible corporate behaviour, value creation, commitment, and dedicated human capital.

The recommendation that enterprises' pursuit of profits goes together with safeguarding stakeholders' interests (Sarbanes, 2002) is meant to ward off problematic human realities and the "agency problem" that ensues in business management; unfortunately, however, the institutionalisation came too late. The emphasis on stakeholder governance is resident in flaws inherent in shareholder corporate governance. The flaws include price measurement incapacitation of companies' performance and/or improvement and the compounding complications of markets' inadequate business externalities quantification, including pollution; short-term and passive investments; fraudulent share-based incentive schemes, which encourage huge benefits for top management and exploit stakeholders; plus gatekeepers' dishonesty—comprising auditors, rating agencies, securities market regulators, and independent directors—have all played parts to weaken shareholder corporate governance strength to champion sound and principled practices in business management and enforce respect for social values.

More persuasively, increasing social responsibilities acceptance in corporate management discourse might perhaps be attributable to shareholder governance shortcomings to limit business externalities. Therefore, while the Sarbanes-Oxley Act, which emphasises wide-ranging bookkeeping reforms for companies and failure to comply attracts severe penalties, seeks to transform corporate governance practice, the innovation is, at best, piecemeal against systemic and holistic change.

The rise in demand for good and sound practices in the business management of late is the recent high-profile financial crises domiciled in corporate administration. It is also noted that financial management and its reporting malfunction is resident in regulatory negligence and governance decay in corporate management. DeFond and Francis (2005) observe that the breakdown of this magnitude strengthens strict monitoring regimes, including improved board's oversight responsibility and robust scrutiny plus governance practices effectiveness (Sarbanes, 2002) to forestall funds mismanagement and encourage corporate accountability and social responsibility.

Again, a board's appointment and firing role promote good financial reporting, laws, standards, and norms plus enterprise effectiveness against problems that often ensue in business management. For an effective corporate governance system, board composition and ethics are paramount components (Boo & Sharma, 2008; Krishnamoorthy, Wright, & Cohen, 2002; Collier & Gregory, 1996; Menon & Williams, 1994) in making audit committees active and proactive in their work (Abbott, Parker, & Peters, 2002). An enterprise's financial reliability, value reporting system, and regulations protection plus legal exposures from disrepute are based on

board and audit committees' ability to uphold and strengthen stockholders' interests and corporate objectives (Carcello, Hermanson, & Neal, 2002).

Meanwhile, championing stakeholder interests is effective through respect for social values, setting out detailed strategies for social programmes and encouraging boardroom decision-making. By respecting social values and environmental objectives, the enterprise is strengthened to achieve progress because consumer confidence is assured. Influencing management programmes and social initiatives means corporate governance policy can work to promote stakeholder interest.

Tying management incentives and remuneration to compliance with social aspirations and environmental accountability is another significant way to promote stakeholder concerns. This will ensure long-term investment interest against those premised on quick financial rewards, most often achieved at a great cost to society and the environment.

Compliance with systemic rules plus adherence to prudent governance practices is another means by which corporate governance effectiveness is demonstrated. Governance structure absence, i.e., the power of influence localised in a few directors, in enterprises results in principles collapse. Therefore, sound governance practices must go alongside appropriate power, management, and functions delineations (definitions) to avoid failures.

Leadership controls and internal rules for collective compliance by all in the organisation ensure corporate governance effectiveness. In effect, weak corporate leadership relaxes and weakens internal regulations and laws, processes, and procedures, leading to inefficiencies in organisational management. To envision and make policies and strategies for developing business needs is usually circumscribed by a lack of foresight. Therefore, competent and experienced leadership for organisations is an asset and allows for rules to benefit social initiatives.

An enterprise system of governance involves a multilayer authority outside management and whose responsibilities affect the organisation. This critical mass includes departmental heads who use internal rules in their functions. Constituting an organisational frontier, this group tracks business activities, identifies potential risks, and designs strategies to prevent such threats. As business management entrenches corporate governance, social accountability and environmental responsibility are poised and/or destined to be promoted. It behooves governance principles to create the appropriate and conducive atmosphere for a governance policy to emerge and oversee social responsibility implementation. The governance policy is needed because

concomitant literature appraisal reveals social accountability and environmental governance policy non-existent and, thus, becomes the research problem gap to fill.

Governance Policy and Self-Regulation Scrutiny

A policy is comprehensive actions (Agbor, 2016; Smith, 1976; Hill, 1997) dictating long-term organisational objectives (Rue & Ibrahim, 1998). Though a policy represents decisions and strategies for operationalising organisational objectives, it must be formulated by an authority or with such powers emanating from the highest level of authority.

A governance policy absence for CR makes corporations adopt a self-regulation strategy to police their own operations. Self-regulation is social objectives' self-determination for stakeholders, and such undertakings and/or interventions are mere decisions unsupported by organisational power and authority, leading to initiatives failures.

The strategy becomes attractive to corporations, especially mining transnational conglomerates, representing interests of powerful international economies and supported by pro-liberal global North governments. Because of the prohibition of national laws to police corporate behaviours, businesses have self-regulated their activities for their own benefits rather than those of the stakeholder communities. This has also incited contestation of corporate roles in social change agenda, evidencing Friedman's proposition or claim that business objective function is to maximise profits and create wealth for its stockholders (Friedman, 1970), a position this paper views as illogical, fallacious, absurd, and deficient, considering corporations' enhanced public roles in recent times.

Studies show that transnational conglomerates' participation in social responsibilities has emboldened and encouraged them to engage in large-scale bad practices, underscoring widespread ecological destruction and social costs (Aid, 2004a, 2004b). The foregoing instance corroborates the claim that recommendations, sets of initiatives, and guidelines established are unheeded to (Visser, 2011).

The apparent self-regulation weakens governance strategy for business social undertakings, in that the enterprise governance system has failed to nurture policy development for CR objectives. Policy postulation is critically significant to make social responsibility and environmental accountability work for stakeholder communities' stability. Therefore, the basis for governance institutions to provide platforms for social discourse toward policy space to oversee business operating environments needs delivery.

Again, the self-regulation encourages easy target setting and deprives host communities of quality and compensatory services. Thus, the claim that corporations meet their corporate citizenship objectives is misleading, complicates matters, and demeans the social change agenda. However, a governance policy provides room for the host community's representation and to influence adequate and appropriate corporate commitments.

More so, the governance programme strategy corroborates Heald's (1970) proposition that businesses should situate corporate accountability in real policies to achieve tangible impacts. Besides, the evidence of corporate involvement in externalities and labour exploitation (Aid, 2004b) has received a great authorial investigation. Therefore, the governance policy distinction provides a pathway for enhanced, quality, equitable, and balanced stakeholder services to reduce the complex complications of markets inadequate measurements of business externalities. It will make commitment cross-checking easier, provide communities with good and standard services, and enable exact and systematic governance while influencing initiative visibility. Governance policies allow social obligation agendas to be planned and encourages transnational businesses operations monitoring.

Social Responsibility Construct

Authorial accounts on corporate citizenship have been varied with extensive exposition, but Carroll's (1979) work is widely cited in the construct's discussion. Rahman (2011) observes that corporate responsibility decisions transcend primary economic and technical goals while recognising the construct's fluidity and proposes handling it in a managerial context. It is claimed that the responsibility agenda predicates on long-term commercial benefits for the firm (p. 70). Heald (1970) argues that corporate responsibility must be demonstrated in real policy frameworks. By this, a reference is made to community-oriented programmes and business executives who are predominantly preoccupied with corporate philanthropy and community relations. Johnson (1971), however, defines a socially responsible enterprise as one that declares huge profits and satisfies employees and other stakeholder's needs, along with stressing that business social obligation is the pursuance of socio-economic goals through elaborate practices approved and implemented by the business.

Moreover, the Committee for Economic Development opines that business establishment is granted by public authority and its purpose is social values and needs protection. CED further indicates that the social agreement is undergoing a crucial transformation and that enterprises are expected to

take charge of social responsibilities and to serve wide-ranging human values. In its roles, a business should contribute substantially to improve social living standards and satisfy public expectations.

Further, CSR is considered a business desire to act in an ethical manner and contribute its quota to society, improve workforce and families' living standards, and ensure sustainable communities. Similarly, it is a standpoint comprising (a) considering and managing social and environmental impacts, (b) pursuing and creating opportunities, and (c) an "enlightened self-interest" approach to normalising stakeholder interests in corporate governance.

To delineate corporate citizenship boundaries, Carroll (1991) establishes a four-level CSR principle for a business. The economic principle relates to a business productive capacity to produce, create job opportunities, and ensure optimal wages. To achieve these value creation objectives, other resources, including technology, are deployed. As production proceeds beneficiaries, a business must fulfill tax obligations and other sovereign duties for developing an infrastructure in the incorporated country. Therefore, business economic responsibility is about delivering products and remaining profitable. Indeed, seven economic activities are delineated, which include satisfying customers with real value commodities; earning profits for investors; creating new wealth; promoting social values (as their wages rise) through new jobs; defeating envy; treating people equitably and improving lives; promoting innovation; and avoiding majority poor and underprivileged exploitation (Novak, 1996).

It is necessary that laws regulate business behaviour because corporations cannot be trusted for acting lawfully, hence the basis for legal responsibility. However, laws have limited scope and cover only what is known and about to happen because human actions determine the present circumstance of the law, and mere legal minimum provision for business' conduct (which are reactive, instructing direction to do things) is inadequate.

Again, ethical responsibilities cover people's moral rights, which are exercised (N. C. Smith & Quelch, 1993) and include social norms, institutions, and decisions, either expected (positive) or prohibited (negative), in society, although they are not written laws (Carroll & Shabana, 2010). These injunctions, therefore, constitute a business's ethical obligations in stakeholder communities. Nowadays, society disregards productivity as moral justification for business wealth generation but noneconomic effects on society, among which are the employee and the customer welfare systems, stakeholders, and business operating environments.

Discretionary obligations are voluntary services that compensate people and societies because corporations operate in communities, and their activities have an impact on social values. Businesses are considered good citizens not by economic performance but social contributions that lift the poor from poverty and squalor. The engagement contract is changing … and businesses must serve wide-ranging social needs (Chewning, Eby, & Roels, 1990).

That corporate decision-making negatively affects communities and lives supports business social expectations and specific business decision-makers' responsibilities (Beuachamp & Bowie, 1983) because it has links with people's welfare and better living standards. The thinking by Chewning (1990) that the enterprise is a social institution makes it imperative for corporations to join hands and build structures, and amongst such social institutions is the family for improvement of economic conditions. The modern corporate world is characterised by professional managers whose decisions have an impact on communities (Miller, 1993) while exploiting societal resources to enrich corporate industrial objectives.

A growing consensus, therefore, suggests that business must assist in solving corporate externalities because enterprise taxes alone are insufficient (Jamal & Bowie, 1995) to ameliorate appalling environmental pollution and other externalities. Indeed, businesses possess massive economic resources, including know-how and financial power (Lippke, 1996), to develop host communities if one wishes.

Method

The technique deployed here aims to project the scientific assumptions and strategies, thus situating the study among research traditions. Specifically, focused interview procedures for relevant field data gathering are used, and the information is used to develop a questionnaire for the study's population. The study deploys an SPSS statistical package (Spearman's correlation and regression) for analysis. The online system provides secondary information as a baseline for empirical data gathering, without which field data collation is difficult.

The investigation conduct interviews for mining transnational conglomerates' representatives selected. These enterprises include the population from which individual management, namely, David Johnson, stakeholder relations, West Africa, and his two deputies responsible for corporate affairs plus other departmental heads (Goldfields Ghana); the corporate affairs head, including other senior management manning security, environment, and human resources (Asanko Gold Ghana); and the president and his vice plus

other departmental heads managing environment, human resource and security portfolios (Golden Star Resources).

However, the investigation also gathers individual-level data, from the community opinion leaders, community-based environmental institutions representatives, plus nongovernmental actors in mining exploration and development, aimed at authenticating and cross-referencing the company-level data obtained.

Focused/semistructured interview techniques are used to gather field data because they enable thorough scrutiny and encourage the investigation to interview details and processes. The field interviews help the investigation to reflect dimensions and objects for thorough understanding. The enterprise-level data are obtained based on questions, including mining impacts on life and property. This information aims at discovering an enterprise's management understanding for ramifications resulting from its prospecting activities, the safeguards, and/or strategies adopted to curb these challenges. Information on community support and future considerations are also pursued. The investigation used prepared questions, subsequently altered to accommodate response dynamism.

To validate and cross-examine the company-level data, the investigation interviewed 50 key participants. Though the individual-level information is merely aimed at cross-referencing the corporate data, it legitimises the data collation process and empowers the investigation to identify misleading responses for reconciliation.

This data-gathering technique gives freedom to the investigation to decide the manner and questions' sequence in the interview processes, and decisions to explore reasons and motive aimed at confining respondents' familiar issues. In general, therefore, this method is deployed in the proposition to constitute unstructured interviews. Indeed, it benefits the investigation by allowing complete data gathering with much precision for questionnaire design and credibility for findings. Again, personal involvement and/or contact with respondents increases response rates and, more so, allows the investigation to have more order and flow of questions. It also helps the investigation to introduce necessary modifications in the scheduled interviews based on initial results, which is not possible when conducting only a survey study without early interviews.

Further, the interview methods offer the investigation a chance to discover data, which is often difficult using only questionnaires and/or participant observation (Blaxter, Hughes, & Tight, 2006). It also allows the research to generate real-life and authenticated data, which is universally acceptable. Besides, this technique is crucial in objectives

setting (Hamel, Dufour, & Fortin, 1993; Yin, 1994) underscoring its use in this research.

There are, however, a few shortcomings in using this data-gathering methodology, which include biases resulting from fatigue in dealing with large participants and the investigation becoming involved with the interviewees. Data generated from qualitative interviews are huge and overwhelmingly voluminous (Neuman & Robson, 2007), and an hour interview may produce gigantic data, which can take several hours or days to transcribe (Dörnyei, 2007). Challenges of potential bias in generating information via interviews are possible, yet it is deployed for small-scale studies.

The investigation pretested the questionnaire for 10 respondents to enable corrections (if any). The pilot informs and guides the investigation in the questionnaire administration to the target research audience. In all, 50 questionnaires are served but 40 returned answered, which is a better response rate.

The research uses Spearman's correlation statistical technique in analysing the survey data because it establishes a paired data relationship, symbolised Sr, which is inhibited as follows:

$(-1 \leq Sr \leq +1)$.

The above is interpreted as, the closer Sr, the stronger the monotonic relationship. Correlation is thus described by strength and size, indicating Sr as an absolute value. In calculating coefficients for the study, no requirement is made of normality, hence a nonparametric correlation statistic is used. Though the method presents relationship strength in two constructs (i.e., it allows for predictions about variables under consideration; uses for wide-ranging phenomena [fictions and nonfiction], and deploys for sample data [N] more than 30), the technique is limited and can create room for biases, especially where high correlation exists and produces misleading information. The bias is experienced because a strong variables relationship does not always mean robust measures agreement.

Additionally, the study employs a regression method for predictors and unknown variables determination. This technique deployment, as an SPSS statistical package, stems from its measure to show causal relationships within and among variables. Meanwhile, as a statistical prediction tool, predicting variables, given the other when those variables are inter-related, it shows a mathematical average variables relationships measurement and, as such, includes a measure that predicts unknown variables from a known one. It estimates dependent variables from independent ones and also shows errors involved.

More so, regression helps in identifying correlations, and an actual relationship enables value estimation for which it is valid. The variables' relationships remain the same until the calculations are completed. While dependent variables assume any value taken at random, independent ones are fixed. Calculating regression involves one reliant measure but many independent variables. Research indicates that the method only gives confidence levels to the investigation that the predictions are okay except proving the claim.

In the nutshell, a mixed method is deployed for data gathering. Thus, the triangulation approach is vindicated and accredited for integrating enquiry that combines techniques (Denzin, 1970, 1992). Indeed, it becomes an excellent beginning for empirical research and receives a more authoritative acknowledgment (Sayer, 2000; Danermark, Ekström,

Jakobsen, & Karlsson, 2002) and enables the investigation to use wide-ranging methods to dissimilar phenomena.

Hypotheses

This paper's overarching objectives, similar assumptions, and theories advanced to provide the basic suppositions and/or principles are to be verified via the following assumptions:

H1: Corporate governance policy correlates with business accountability and environmental responsibility.

H2: Business governance policy for corporate accountability makes enterprise commitments adequate and ensures effective implementation.

Research Model 1

Figure 1. Strong Corporate Governance System (A)
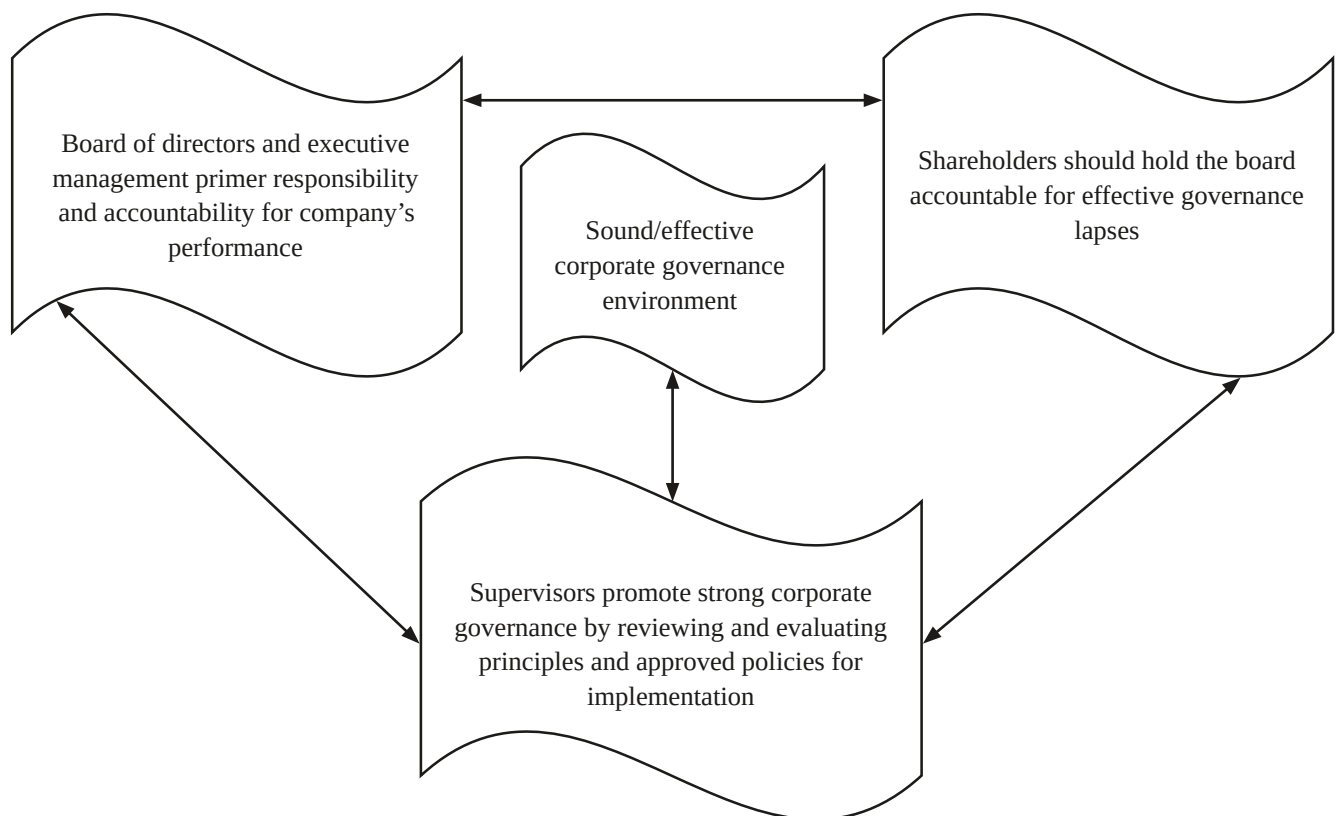
Source: Author

Research Model 2

Figure 2. Corporate Governance System (B)
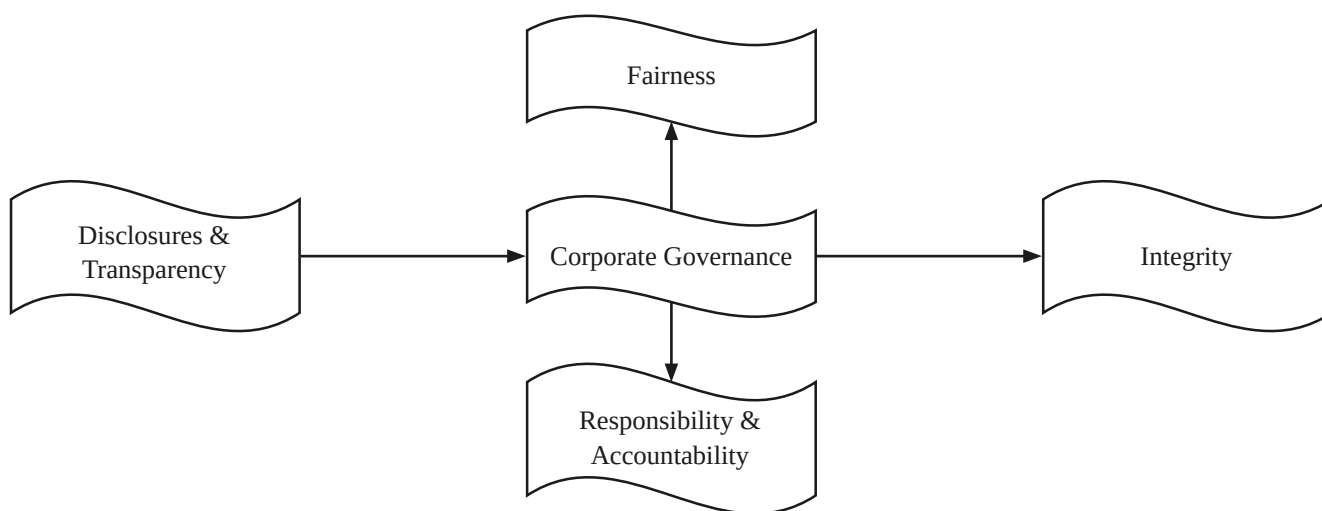
Source: Author

The corporate governance models, which are shown in Figures 1 and 2, explain the board of director's oversight functions through chief executive officers right down to junior management staff in an organisation's routine activities to achieve results. The respect for organisational rules and regulations are paramount to achieving stated objectives, which is a key ingredient in governance principles.

Results and Discussion

The demographic variables indicate respondents' stratification (as male and female) and their agreement percentages with specific questions. Male constitutes 42.5% (n = 17), while 57.5% (n = 23) is female for whole population (40). In all, the respondents' agreement with questions reflect questionnaire acceptance and, therefore, makes it viable and valid for use.

Table 1. Questionnaire Consistency Indicators

Measure	Cronbach's Alpha	Cronbach's Alpha – Standardised Items	N
CR	.916	.933	4
CG	.883	.867	7
POL	.925	.937	7

Note: CR=Corporate Responsibility, CG=Corporate Governance, POL=Policy, N=Number

Table 1 is a reliability statistic assessment for the questionnaire, which explains internal computation dependability. The statistic values (.883, .916, and .925) for CG, CR, and policy, respectively, are outstanding coefficients and,

therefore, make the questionnaire highly reliable to be used for the study.

Additionally, a multi-item scale helps in accuracy, applicability, and scale quantification (Pandey, 2009). The Cronbach's alpha is deployed because it defines the questionnaire's internal reliability and its ability in determining internal and ratio scales, while an established guideline (George & Mallery, 2003; Gliem & Gliem, 2003) describes variables' consistency and reliability under discussion. Again, an alpha value gives an indication that variables are accepted (Malhotra, Kim, & Agarwal, 2004) and inferences can be made, too.

Table 2. Descriptive Statistics

Item	Mean	Standard Deviation	N
CR total	10.3750	3.71889	40
CG total	25.9250	4.68159	40
POL total	20.9750	4.43464	40

Note: CR=Corporate Responsibility, CG=Corporate Governance, POL=Policy, N=Number

Table 2 shows the group total descriptive statistics. In the test analysis, CSR, CG, and policy totals show a little spread, indicating variables' inconsistency, which meets the validity criterion and makes the constructs support the study's proposition.

The research aims are, first of all, to produce proof that governance policy can improve social accountability and environmental responsibility; second, the policy distinction represents a novel arena for business commitment

Table 3. Correlations for Group Total

	Group Total		CR Total	CG Total	POL Total
		Correlation Coefficient	1.000	.628**	-.332*
	CR total	Sig. (2-tailed)	.	.000	.036
		N	40	40	40
Spearman's rho	CG total	Correlation Coefficient	.628**	1.000	-.566**
		Sig. (2-tailed)	.000	.	.000
		N	40	40	40
	POL total	Correlation Coefficient	-.332*	-.566**	1.000
		Sig. (2-tailed)	.036	.000	.
		N	40	40	40

Note: CR=Corporate Responsibility, CG=Corporate Governance, POL=Policy
**Correlation is significant at the 0.001 level (2-tailed).
*Correlation is significant at the 0.05 level (2-tailed).

Table 4. Regression Coefficients[a]

Model		Unstandardised Coefficients		Standardised Constants	t	Sig.
		B	Standard. Error	Beta		
		6.636	.655		10.136	.000
1	Board effectiveness favours business & CR	-1.068	.148	-.678	-7.229	.000
	CR committee independence is doubted	-.432	.085	-.558	-5.059	.000
	Sustainability company incorporates sustainable values in its operations	.500	.054	1.065	9.258	.000

[a.] Dependent Variable: Lack of a policy for CR governance results in corporate carelessness, irresponsibility, and unaccountability for its actions.

implementation; third, the policy framework absence is at the heart of CSR projects failures. The above-mentioned goals are to be explored in the ensuing deliberations to proffer solutions to queries, such as "Can corporate governance policy incentivise improvement in business accountability and environmental responsibility?" and "Is the policy distinction robust to reduce ineffectiveness and inadequacies in initiatives implementation?"

Table 3 shows p-value ($p < .001$) and negative coefficient (-.566**), which shows a strong policy agreement with corporate governance. This means that corporate governance can support a policy framework for social accountability and environmental responsibility. Again, at a p-value .036, an association (-.332*) exists between policy and CR, which reflects current policy lack for CR, and a validation for policy nuance application to social commitments. Additionally, a p-value ($p < .001$) occasions positive comparability (.628**) between CR and CG, signifying that governance can promote social responsibility through a policy space creation.

The CR, CG, and policy interplay reveal symbiosis among the constructs, which validate the suppositions that social

responsibilities can be improved via business governance policy and represent fresh ground for corporate responsibility implementation; yet, its absence promotes commitments and intervention ineffectiveness and insufficiency for the stakeholder communities. This is, therefore, sufficient grounds to infer that an enterprise governance policy incentivises improvement in business accountability to stakeholders, and policy distinction is a robust platform to reduce ineffectiveness and inadequacies in initiatives implementation.

Heald (1970) recognises impracticality self-regulation as a vehicle for social accountability and environmental responsibility and calls for situating CR in the actual policies to deliver material social impacts. This suggests that initiatives undertaken by transnational conglomerates can improve only if the execution is done through a purposive governance policy framework because the policy distinction will provide standards and benchmarks to avoid management inertias and idiosyncrasies.

Frynas' (2005) concern for commitment ineffectiveness and inadequacy to meet desired social demands is dispelled by the findings that policy application will promote social intervention effectiveness. This, therefore, sustains the claim that

self-regulation and/or self-commitment strategies for implementing initiatives for and in stakeholder communities are unfeasible, sporadic, and impromptu and deliver little or lead to significant project failures. The challenge, thereof, brings to sharp focus haphazard and unsystematic programmes implementation, which leads to stereotype maintenance involving commitments being adjudged by corporate management, i.e., an approach that undermines commitments' effectiveness and adequacy. No wonder that huge evidence shows corporate involvement in cost externalisation and labour exploitation (Aid, 2004; Malan, 2005; Pakenham, 1992; Armstrong, 2005; Tolhurst, 2010; Visser, 2010).

The result also vindicates Auty's worries that developing countries' capacity to harness mineral wealth and build social capital is constrained because the national policy is nonexistent. The Glencore–Xstrata merger (which controls the zinc and copper deposits) accrues $70 billion profits to the mining conglomerate, yet the resource country, the D.R. of Congo, receives nothing from this windfall, demonstrating how little benefit there is for the resource owners.

Deductively, the evidence adduced social responsibilities and environmental accountability scantiness, which validate the notion that corporate citizenship is used as a promotional tool to elicit corporate legitimacy, which is a good image for increased profits and improved financial outlook. Similarly, studies and/articles scrutinise rigidities (tensions) in private business, self-regulating social and environmental objectives while stressing challenges involved in building and sustaining support for such initiatives among different national industry groups (Conzelmann, Wolf, Graz, & Nölke, 2007) and commitments' inadequacies for host communities (Frynas, 2005).

Table 4 contains the value of each term, statistical tests for the constructs, and the coefficients. The p-value (.001 x 3) is statistically significant, while the predictor is prominent and ought to be interpreted because the predictor's value is related to response variables changes. That the selected variables indicate statistical significance mean abundant evidence to believe the constructs are monotonically correlated and, therefore, validate the studies objectives. Additionally, t-values (-7.229, – 5.059, 9.258) also display little significant variation to data sample, which indicates constructs have high comparability and authenticate the study's predictions. Likewise, standard error coefficients (.148, .085, and .054) show insignificant values, which indicate the observations are closer to the preferred fitted line and thus support the research expectations.

The above, therefore, means a conclusion can be drawn that a governance policy absence leads to corporate carelessness and irresponsibility in meeting stakeholder needs.

Moreover, studies show that the apparent little corporate engagement in social accountability leads to far-reaching business "irresponsibility" (Frynas, 2005; Banerjee, Chio, & Mir, 2009), thus underscoring temptation to describe CSR as an oxymoron for the "carelessness" it has been handled with (Devinney, 2009). The finding further shows the current self-regulation, through which social amenities are delivered by transnational enterprises, is an inappropriate strategy, which validates the policy distinction recommendation and subsequent application to CSR. In this way, the governance policy proposition is thus understood to benefit business, social accountability, and environmental responsibility. For corporations, it gives proof of good corporate citizenship, while governance policy improves social accountability and respect for norms, precepts, and values. Heald (1970) supports the governance policy proposal by noting that corporate commitments must be situated in and backed by a policy to deliver material social impacts.

Meanwhile, a unit change in the model's constant (6.636) will lead to this measure (-1.068) of change in board effectiveness, which favours business and CSR. Likewise, one unit change of the model's constant (6.636) will lead to measure adjustments (-.432 and .500) and confirm CSR committee independence is doubted and that sustainability in a company incorporates sustainable value in its operations, respectively. The result demonstrates that significant evidence exists to believe governance policy would improve and promote corporate commitments and undertakings and to forestall business irresponsibility and unaccountability.

This implies that governance policy ensures systematisation, planning effectiveness, and interventions execution, best practices, benchmarks, and increased programmes visibility while providing the basis for subjecting management's idiosyncratic decisions to scrutiny. Indeed, the proof provided in this paper justifies the claim governance policy is an innovation for and in business accountability to its stakeholder constituencies and the environment.

Conclusions

Business roles in society have escalated because they benefit corporations while ensuring socially stable communities and environmental accountability. In this context, a dialogue is emerging between public authority and corporate power in regard to the appropriate method of collaboration to motivate mutual respect and gains. Unfortunately, the fundamental element is mistakenly ignored; that is, a governance policy for the social transformation agenda. The paper advocated for a governance policy to oversee corporate commitments and environmental accountability because it will provide the

life wire for corporate citizenship resuscitation and makes business pledges' implementation effective and efficient.

It is empirically proven that a governance policy promotes and improves social responsibilities through eliciting corporate sincerity, limiting management inertias and idiosyncratic problematic human realities, while acting as a new paradigm shift in corporate citizenship delivery. This very thinking prompts the argument that corporate citizenship must be located in and supported by an actual business policy to produce quantifiable, collective, societal effects (Heald, 1970).

Interviews and survey data are measured via an SPSS statistical technique (involving Spearman's correlation and regression) for analysis. This is because the pluralism method, having been justified and credited for integrating research (Denzin 1970, 1992), enables investigation into wide-ranging procedures to the dissimilar phenomenon. Funding remains a big challenge, especially as interviews for on-site information and/or data collation are usually expensive, resulting in small and limited data for analysis.

In a nutshell, the paper suggests examining business responsibility and environmental accountability through governance policy perspective to establish suitable methods for governance policy parameters operationalisation and to provide future academic enquiry.

Acknowledgment

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Je politika upravljanja podjetij nova paradigma za družbeno odgovornost? Raziskovalni program iz Gane

Izvleček

Družbena odgovornost je bila deležna veliko pripomb glede poslovnih zavez, ki služijo kot nadomestilo za dobičke podjetij in/ali iskanje koristi v gostiteljskih skupnostih. Temeljna komponenta družbene odgovornosti in izboljšanje le-te – politika upravljanja – sta žal prezrta. Prispevek zato priporoča podjetniško politiko za pravično in kompenzacijsko korporativno državljanstvo v lokalnih skupnostih. Da bi utemeljili predlog, v prispevku utemeljujemo, da se lahko družbene odgovornosti izboljšajo s politiko upravljanja, da avtoritativna politika predstavlja odločilno spremembo izvajanja socialnih pobud, in da odsotnost politike spodbuja neučinkovitost izvajanja in premalo zavez. Analiza podatkov s pomočjo programa SPSS kaže, da so koeficienti statistično značilni, kar potrjuje trditev, da politika upravljanja podjetij bogati in pospešuje družbeno odgovornost. Predlagani okvir politike prinaša ne le konkurenčne, znanstvene, objektivne in odlične storitve, temveč predstavlja tudi novost in možnosti za prihodnje raziskave.

Ključne besede: politika upravljanja podjetij, državljanstvo podjetij, družbena odgovornost, eksternalije

Estimation of Government Spending Multiplier in EU Economies

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Abstract

The aim of this paper is to estimate government consumption multiplier and to examine the effect of various characteristics of countries on the size of fiscal multiplier. We apply a panel VAR model following Ilzetzki et al. (2013) for a sample of 28 EU countries covering the period from 1995 to 2017. Key findings are, first, the estimated average fiscal multiplier is larger than unity. Second, the size of fiscal multiplier is larger in the cases of lower public indebtedness, for more developed European countries and for more financially open economies, which is also in line with relevant empirical literature. Regarding the role of trade openness, the results are inconclusive. In addition to this, membership of countries in the European integrations positively affects the size of fiscal multiplier. Therefore, fiscal policymakers should use fiscal stimuli as the instrument of boosting short-term economic growth selectively and consider country-specific characteristics. This paper contributes to the ongoing discussion in two ways, it examines the effect of additional characteristics of countries on the size of fiscal multiplier and updates existing empirical literature.

Keywords: country characteristics, fiscal multiplier, panel VAR

Introduction

The Great Recession triggered a broad discussion about the role and effectiveness of economic policy for stabilizing business cycles and promoting economic growth. The deep recession after 2008 pushed monetary policy into an unknown territory, where lack of established practices raised important questions about the way of conducting economic policy in modern times (see, for example, Blinder et al., 2016). At the same time, fiscal policymakers under threatening debts, public deficits, and simultaneous pressure from international economic arenas applied rather contradictory measures tracking the goal of balancing public budgets. Recent studies showed that the mechanism of fiscal multiplier works and that its effect on output is non-negligible but at the same time inconsistent (see, for example, Auerbach & Gorodnichenko, 2011; Warmedinger et al., 2015; Jackson

et al., 2018). Studies dealing with the analysis of the most frequent determinants of the size of fiscal multipliers already exist (see, for example, Ilzetzki et al., 2013; Koh, 2017; Deskar-Škrbić et al., 2017) and offer us certain insights into the subject area, but there is no consensus in regard to the impact of all determinants. Consequently, our empirical understanding of the mechanism of fiscal multipliers remains limited (Ramey, 2019; Devereux, 2018).

The main purpose of this paper is to estimate the average size of fiscal multiplier on the panel sample of 28 European Union (EU) countries using an updated annual data sample covering the period from 1995 to 2017 and to scrutinize the impact of selected countries' characteristics on the magnitude of the government spending multiplier. We examine how public debt, trade openness, financial openness, level of development, membership in political and monetary integration, and the period of the Great Recession affect the value of fiscal multipliers. To obtain estimates of fiscal multipliers based on vector autoregression, we follow the seminal paper of Blanchard and Perotti (1999) and its modified version for applying panel models used in Ilzetzki et al. (2013) and Koh (2017). Our results could provide insight into the country-specific use of fiscal stimuli by boosting short-term economic growth.

The remainder of this paper is structured as follows. In Section 2, we present a brief evaluation of empirical literature about factors that crucially affect output changes due to shifts in government spending. In Sections 3 and 4, we describe the methodological framework and the data sample used in this study, respectively. Then, the results are documented and outlined in Section 5. The main conclusions are given in Section 6.

Brief Overview of the Literature

In this chapter, we summarize the key findings of the relevant empirical literature, focused on examining the influence of country-specific characteristics on the size of fiscal multipliers. Perotti (2002) and Blanchard and Perotti (1999) set out theoretical and methodological foundations for the development of the study of fiscal policy and its impact on the GDP and on the other key macroeconomic variables based on the vector autoregression methodology. Blanchard and Perotti (1999) showed that positive government spending shocks have a positive effect on the GDP, while positive tax shocks have a negative impact on the GDP. On a sample of five developed economies, namely, the United States, Germany, Great Britain, Canada, and Australia, Perotti (2002) observed that the impact of fiscal policy on the GDP and its components became weaker in the years after 1980. Giordano et

al. (2007) examined the effects of fiscal policy on private GDP, inflation, and long-term interest rates using the smooth transition vector autoregression (SVAR) approach on the example of the Italian economy. The authors report a positive impact of the increase in direct government consumption on output. Burriel et al. (2009) also emphasized that expansive fiscal policy has a positive impact on the GDP and on private consumption in the short-term. The fiscal multipliers in the Euro Area are comparable in size with those in the United States and are higher in the case of budgetary problems than in normal circumstances.

Further research showed that it is reasonable to distinguish between different phases of the business cycle. Auerbach and Gorodnichenko (2010, 2011, 2014) estimated multipliers in separate studies for the United States, OECD countries, and Japan. The authors pointed out that the calculated values of the multipliers differed between recession and expansion, with values at the time of recession increasing. Batini et al. (2012) also corroborated the thesis of higher spending multipliers in phases of recession. On the other hand, results of Ramey and Zubairy (2014) for the United States did not indicate a statistically significant difference between the values of the multipliers relative to the phase of the business cycle. However, the development of methodology continued, so Riera-Crichton et al. (2015) showed that we get even higher values of fiscal multipliers during extreme crises. In addition to this, if fiscal policy stimulates government consumption at the time when it grows from year to year, we get even higher estimated multipliers in all three phases of the cycle.

Some researchers showed that the structural characteristics of countries are also relevant for the output effect of government spending. Ilzetzki et al. (2013), for example, found that the output effect of fiscal stimulus is greater in more developed countries, the size of fiscal multipliers is smaller in more open economies compared with the reference figures in closed economies, and that fiscal multipliers are smaller or even negative in countries with high public debt. Silva et al. (2013) found similar results for an annual panel of the Euro Area countries. Hory (2016), on the sample of 48 emerging and advanced economies, gauged a considerably lower size of spending multiplier in the case of emerging market economies than in the case of advanced economies. Furthermore, spending multiplier is negatively correlated with imports, public debt, and savings but, on the other hand, is positively correlated with unemployment level and financial development. Koh (2017) confirms findings of other studies and implies that fiscal multipliers are larger during periods of low public debt, in periods of financial crisis and economic downturn, and in more developed countries. But contrary to the findings in Ilzetzki et al. (2013), Koh (2017) reports that fiscal multipliers are not necessarily smaller in

the economies with high trade and financial openness. He also argues that the size of fiscal multipliers does not necessarily depend on the type of exchange-rate regime.

Deskar-Škrbić et al. (2017) among other structural determinants examine the role of the tax burden for which they suggest a negative correlation with the size of a fiscal multiplier. Recently, Borsi (2018) estimated larger fiscal multipliers in times of a credit crunch; further, Miyamoto et al. (2018) once again emphasized the role of larger fiscal multipliers in the periods of zero lower bound when crowding out effect of private expenditures is considerably reduced.

In a nutshell, according to the findings of studies presented above, we may expect that the size of fiscal multiplier is larger in cases of economic downturn, lower public debt, relatively more closed economies, in industrial countries, and under a fixed exchange-rate regime. However, empirical literature is not unanimous about the size dependence of fiscal multipliers to some other specific structural determinants of economies.

Methodological Framework

For assessment of the size of a fiscal multiplier, the methodological framework based on a vector autoregression model was applied. We followed the seminal paper of Blanchard and Perotti (1999) and adopted their methodology on panel data model with referencing on Ilzetzki et al. (2013) and Koh (2017). A panel VAR approach was also used in Silva et al. (2013) and Hory (2016).

The baseline model covers four macroeconomic variables: real government consumption ($g_{i,t}$), real GDP ($y_{i,t}$), fiscal balance to GDP ($FB_{i,t}$), and real effective exchange rate ($reer_{i,t}$). The vector of endogenous variables can be written as $X_{i,t}$ and the vector of residuals as $U_{i,t}$. A reduced form of the panel vector autoregression is defined in Equation (1):

$$X_{i,t} = C(K)X_{i,t-1} + U_{i,t}, \tag{1}$$

where $X_{i,t} = [g_{i,t}, y_{i,t}, FB_{i,t}, reer_{i,t}]'$ and $U_t = [u_{i,t}^g, u_{it}^y, u_{it}^{FB}, u_{i,t}^{reer}]'$, K is the operator of lag structure, and $C(K)$ is the polynomial of corresponding degrees.

To identify shocks in government consumption, we use Cholesky decomposition, where the ordering of the variables is crucial. Results are based on the following system of equations:

$$AX_{i,t} = \sum_{k=1}^{K} C_k X_{i,t-k} + BE_{i,t}, \tag{2}$$

where $X_{i,t}$ is a vector of endogenous variables for a given country i and a year t. C_k is the matrix of the own and cross effects of the kth lag of the variables. Matrix B is a diagonal; therefore, $E_{i,t}$ represents orthogonal shocks to government consumption (Ilzetzki et al., 2013). We order the variables according to Ilzetzki et al. (2013) and Koh (2017). Thus, our model consists of variables in the following order: real government consumption, real GDP, fiscal balance to GDP, and real effective exchange rate. Country fixed effects are also included in these regressions.

Koh (2017) stresses that an alternative approach using annual data instead of quarterly data as in Ilzetzki et al. (2013) is also credible and provides robust results. The results are reported when the number of lags is set to one, which is comparable with a four-quarters lag structure in quarterly data analysis. For estimation purposes, the panel vector autoregression package for Stata provided by Abrigo and Love (2016) was utilized. The generalized method of moments is used as an estimation technique.

Ordering of the variables defines the causal relationships between them. The GDP responds contemporaneously to the changes in government expenditures; however, at the same time, government consumption does not react to the changes in output within the same period. Following Koh (2017), we assume that the changes in government consumption patterns on an annual basis correspond to actual fiscal budget decisions, which are made mainly once a year. Additional advantages of using annual data instead of quarterly data are, first, lower importance of the seasonality effects; second, a smaller role of the anticipation effects because the changes in the government consumption are more difficult anticipated by economic agents on a yearly basis. Furthermore, fiscal balance to GDP responds contemporaneously to the changes in output, and all three variables, i.e., government consumption, output, and fiscal balance, contemporaneously affect the real effective exchange rate.

Data

The base panel vector autoregression model in this paper comprises real government consumption, real GDP, fiscal balance to GDP, and real effective exchange rate. All variables have annual frequency and cover the period between 1995 and 2017. Data for real government consumption and real GDP are collected from the World Bank (2019), specifically from the World Development Indicators database in the form of local currency units and constant prices. Data for fiscal balance to the GDP, expressed in percentage points, are collected from Eurostat (2019), whereas data for real effective exchange rate are provided from Darvas (2019).

The real effective exchange rate is calculated on the basis of a country's 67 biggest trading partners and with using CPI index as a proxy for domestic and foreign price levels. All three variables with the exception of fiscal balance to the GDP are stated in first log differences. These four macroeconomic variables for EU member states are organized in strongly balanced panel data sample. Because the goal is to operate with a balanced panel, we did not use longer time-series data for some countries even though they are available.

Additional variables are collected for the purpose of examining the role of countries' characteristics. Thus, we employed public debt to GDP data in percentage points from Eurostat (2019) to establish the public indebtedness of European countries. Then, with trade to GDP data from the World Bank (2019), the selected countries were classified according to their trade openness. Trade to GDP indicator includes trade in merchandise and services and flows of exports and imports. Next, data on the GDP per capita in constant 2010 USD are employed from the World Bank (2019) to classify countries into two groups according to their level of development. To check the impact of the financial and capital openness of the economy on the size of a fiscal multiplier, we used the Chinn-Ito index (2006). For the purposes of checking the effect of the inclusion of countries in the EU or in the Economic and Monetary Union (EMU) on the magnitude of the fiscal multiplier, we constructed our own series, indicating the time when each country entered an individual integration. Next, based on the study of the macroeconomic situation in the EU, we mark the period of the Great Recession for 2008–2015. Even though Euro Area GDP growth began with sluggish recovery in the first quarter of 2013, average real GDP of the Euro Area surpassed the pre-crisis level in the third quarter of 2015. In addition to this, employment level in the Euro Area began rising at a bit faster pace at the beginning of 2015 (CEPR, 2017).

In determining the relative thresholds for individual macroeconomic determinants, the study partly follows the work of Ilzetzki et al. (2013) and Koh (2017), though relative thresholds in this paper are adjusted according to the nature of variables in our sample. If the public debt exceeds the value of 60% of the GDP, that period is classified as one of high public indebtedness. The aforementioned limit in the level of public indebtedness is also in line with the Maastricht criteria. Regarding the level of development, we include countries into a group of less and more developed economies. Namely, the median GDP per capita in the year 2004 is used as the threshold. For the purpose of ranking countries with regard to the trade openness, we first calculated the average shares of trade in the GDP for all countries and then established each country's status. Countries

with less than 95% share of trade in GDP are considered closed. Last, regarding financial and capital openness, threshold, which separates countries or individual periods, was determined based on the calculated average value of the Chinn-Ito index.

Value of fiscal multiplier represents the output effect of government spending measured in the absolute currency terms. The impulse and response variables are expressed in first log differences, approximating growth rates; consequently, results can be interpreted as elasticities. To obtain fiscal multipliers, values of elasticities are divided with an average share of government consumption to GDP in the sample. The calculations of the impact multipliers are reported.

Results and Discussion

The results are illustrated graphically on a 10 years' forecast horizon. In all cases, impulse represents shock in the government consumption with the magnitude of 1% of GDP. Therefore, the magnitude of output effect can be shown as lines that represent the values of a fiscal multiplier. The shaded area on the forecasting horizon indicates statistically significant results. On the other hand, the unshaded area represents statistically insignificant results. The values of fiscal multipliers and economic interpretations are given hereinafter.

Figure 1 depicts the estimated value of the fiscal multiplier on the predictive horizon for the whole EU panel. As illustrated in the figure, the fiscal multiplier has a statistically significant immediate effect that lasts for three years. The maximum value of the estimated multiplier is observed directly after introduced shock in government consumption when it climbs slightly above 1.3. However, the values of a multiplier then gradually converge to zero. In our survey, annual data were used instead of quarterly data; therefore, the results must be interpreted accordingly. It follows that the estimated multiplier after the first year should be compared with the multiplier after the fourth quarter in the other studies.

The purpose of the research is not merely to estimate the size of fiscal multiplier in EU member states but to examine the impact of the selected characteristics of the countries on the size of fiscal multiplier. The results of the calculations indicate that the level of public indebtedness affects the size of a fiscal multiplier. In the case of low public indebtedness (Figure 2), the output response to shock in government consumption is statistically significant in the first three years. The corresponding multiplier reaches the highest value when it is slightly above 1.6 and then gradually diminishes to zero. On the other hand, Figure 3 shows that, in the case of

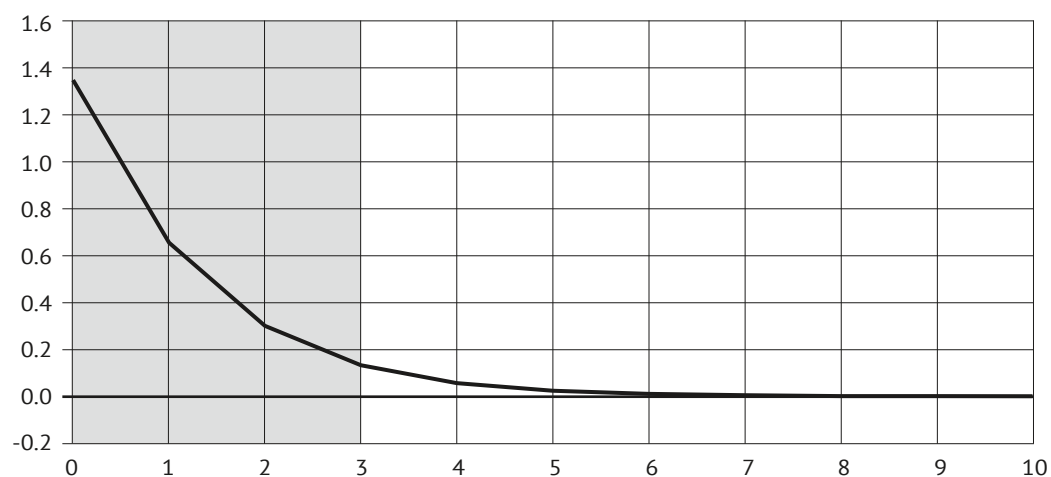**Figure 1.** Dynamics of Fiscal Multiplier in the EU Sample

Figure 2. Fiscal Multiplier under Public Debt Less Than 60% of GDP
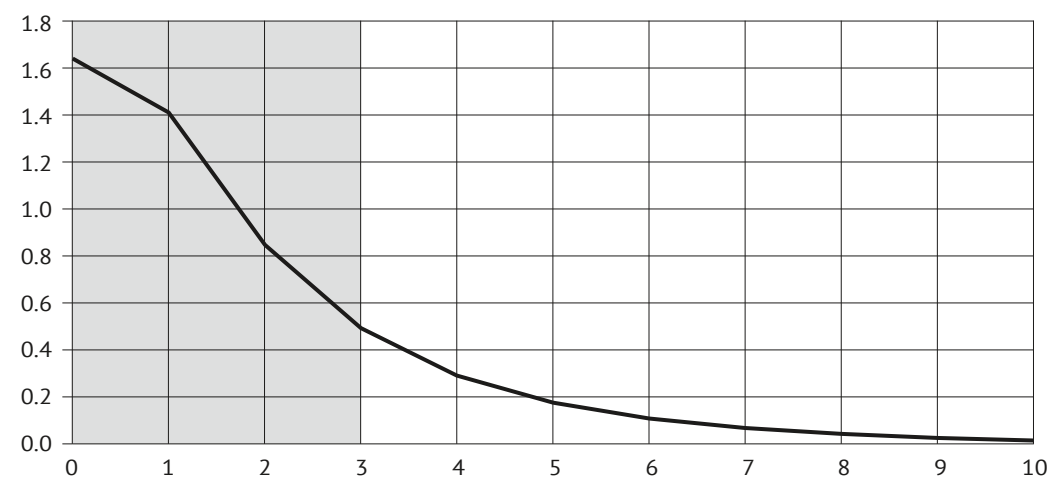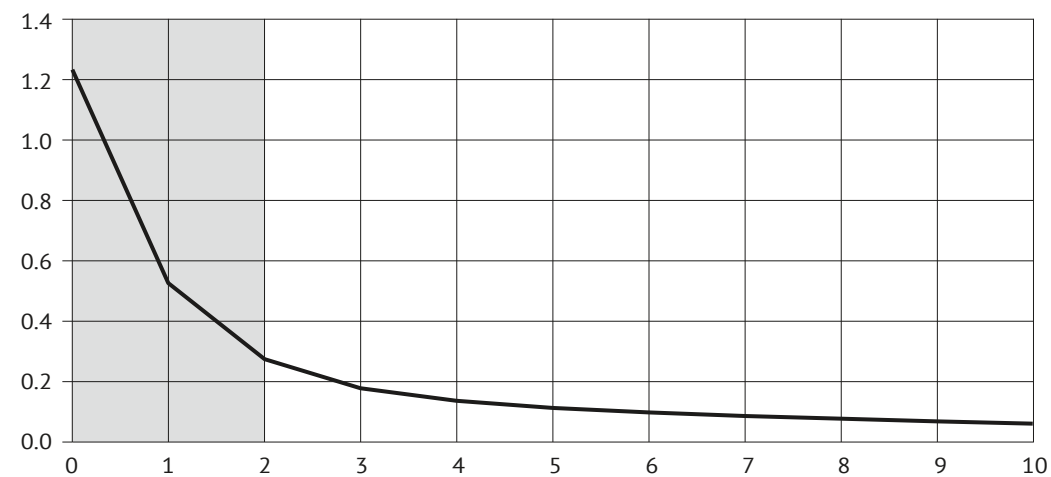

Figure 3. Fiscal Multiplier under Public Debt More Than 60% of GDP

relatively higher public indebtedness, the estimated values of the fiscal multiplier are relatively lower. A multiplier reaches maximum value immediately after the introduction of a positive shock in government consumption, i.e., its value is slightly over 1.2. The magnitude of the output response, which is statistically significantly different from zero only within the first two years, gradually converges to zero.

The influence of the level of public indebtedness on the size of a fiscal multiplier is also supported by economic theory because the countries with higher public debt have difficulties in securing the financial support of stimulative fiscal policy due to rising interest rates. Consequently, public treasuries are often under pressure, which can lead countries to a negative debt spiral. The increased share of public expenditures on interest payments can significantly reduce the financial potential of stimulative use of fiscal

incentives. Our findings are in line with the results from the studies of Ilzetzki et al. (2013), Koh (2017), Hory (2016), and Deskar-Škrbić et al. (2017). The problem of high public indebtedness was exposed during the Great Recession, especially in the EU, where many member states have had problems with the management of rising public debt. As a result, some member states could not apply a countercyclical fiscal policy and were instead forced to painful fiscal tightening. Member states should therefore deleverage public budgets during relatively stable times, but, in times of economic downturn, they should give a push to the aggregate demand in order to stimulate economic growth.

In the case of trade openness, our results do not offer a clear-cut conclusion and suggest that trade openness affects the size of fiscal multiplier to a lesser extent. Figure 4 indicates that, in the case of less open economies,

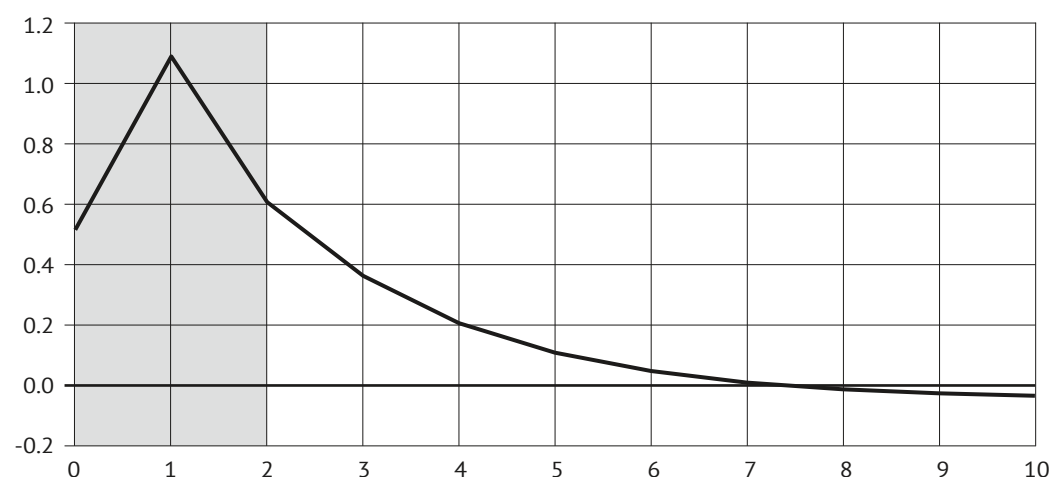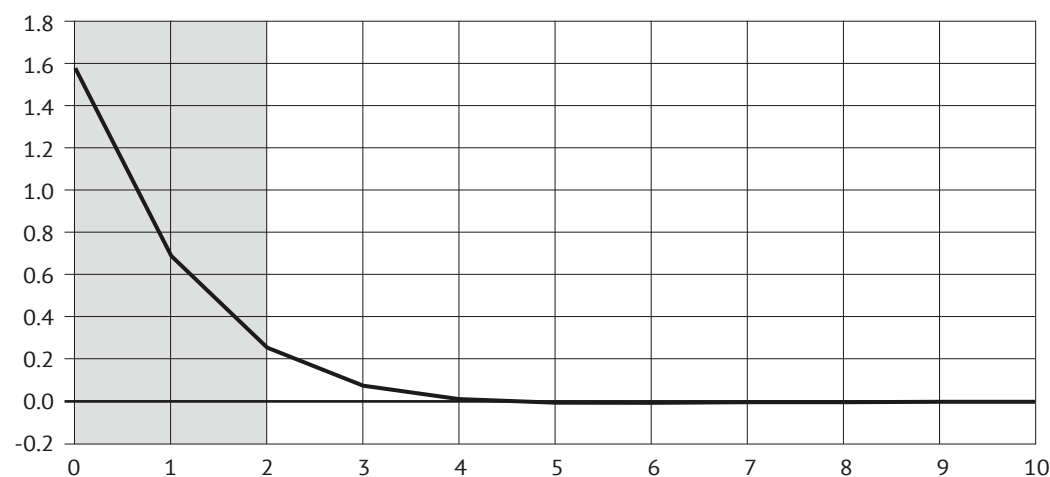**Figure 4.** Fiscal Multiplier under Lower Trade Openness

Figure 5. Fiscal Multiplier under Higher Trade Openness

the multiplier reaches the highest value after the first year, namely, 1.1. In the long run, an estimated multiplier gradually converges to zero, the values of which are statistically significant only in the first two years. In the case of more open economies, the value of a multiplier is the highest immediately after the introduction of the shock, around 1.6, but the output response is less persistent (Figure 5). The results are statistically significant within the first two years; however, our results do not provide a clear answer to the role of trade openness in determining the size of a fiscal multiplier. Similar findings are also provided by Koh (2017), while, for example, Ilzetzki et al. (2013), Silva et al. (2013), and Hory (2016) identify higher values of multipliers in more closed economies. Economic theory also envisages higher fiscal multipliers in more closed economies, as the larger share of the initial fiscal stimulus remains within the borders of countries

because of lower import leakage. It should also be noted that our data sample consists only of member states of the European Union, which are all considered relatively open in comparison with the rest of the world.

In case of a relatively smaller financial openness of economies, values of the fiscal multiplier do not exceed unity and are relatively lower compared with values recorded in more financially open economies. Figure 6 shows a statistically significant response of output within the first two years. In periods when countries experienced a relatively more financially open economic environment, we estimated higher values of fiscal multiplier, i.e., the maximum value is observed immediately after the introduction of the shock and amounts to 2.0 (Figure 7). The output response is statistically significantly different from zero only within the first year. The results of our research are partly in line with the

Figure 6. Fiscal Multiplier under Lower Financial Openness
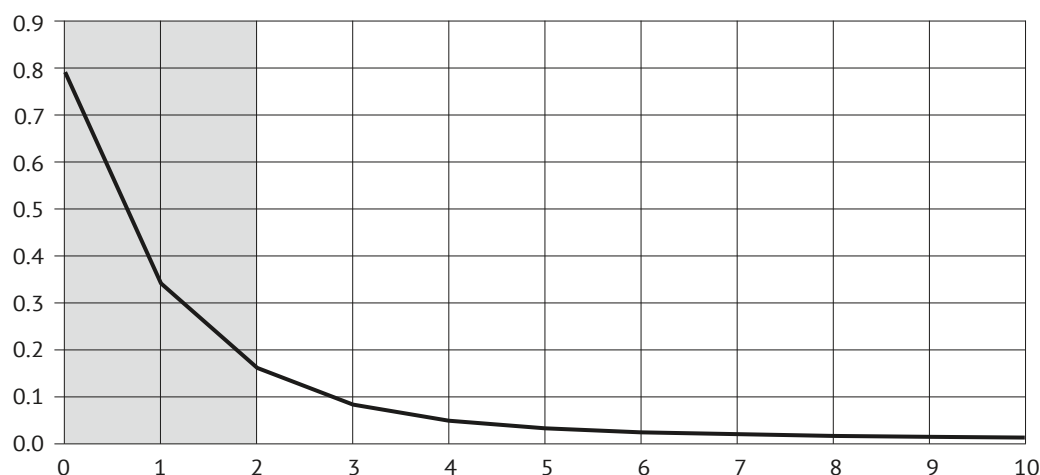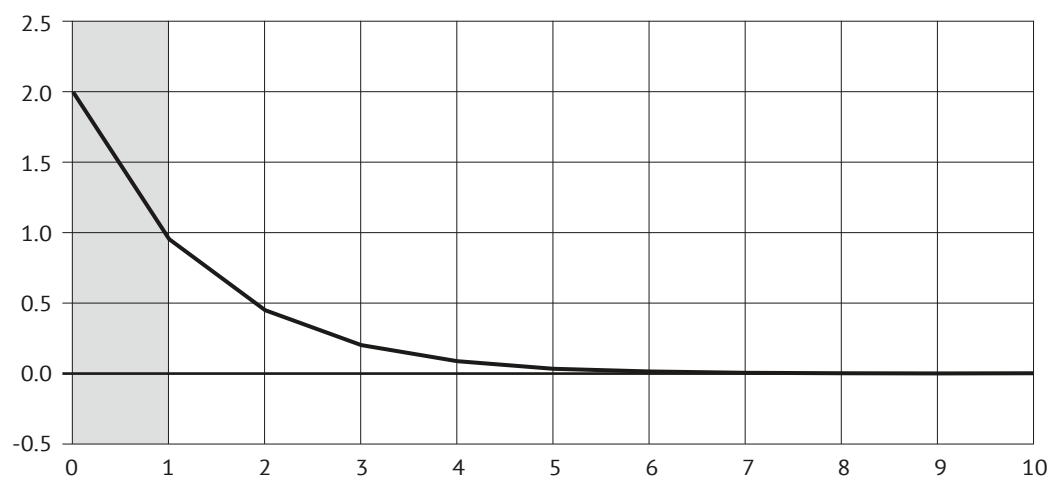

Figure 7. Fiscal Multiplier under Higher Financial Openness

results of Koh (2017), as he also notes that countries that are financially more open do not necessarily record lower values of fiscal multipliers; they can even be higher than in the case of financially more closed countries. On the other hand, Ilzetzki et al. (2013), contrary to Koh (2017), argue that fiscal multipliers are higher in the case of more closed economies in terms of international flows of capital.

Level of development is the next in line of structural characteristics, which can influence the size of the fiscal multiplier. For the group of relatively less developed European economies, we estimate the maximum value of the fiscal multiplier at 1.35 (Figure 8), which is achieved immediately after the introduction of the shock in government spending. The output response is statistically significantly different from zero in the period of the first three years, while the multiplier values gradually converge to zero.

Among relatively more developed European economies (Figure 9), the fiscal multiplier reaches the maximum value after one year, when it stops at 1.9. Although the direct response of output is considerably lower in the case of more developed economies, it rises then to relatively higher values; in addition to that, a longer persistence of the effect of the fiscal stimuli is also detected. In this case, too, the output response is statistically significant over a period of three years.

Hory (2016) estimates that, in the economically developed countries, the values of a fiscal multiplier are close to unity, while for developing economies he reports multiplier values closer to zero. The comparable influence of the level of economic development on the size of a fiscal multiplier is also found in Ilzetzki et al. (2013) and Koh (2017). Koh (2017) explains the results with a more sophisticated bureaucratic system in developed economies,

Figure 8. Fiscal Multiplier for Less Developed Economies

Figure 9. Fiscal Multiplier for More Developed Economies
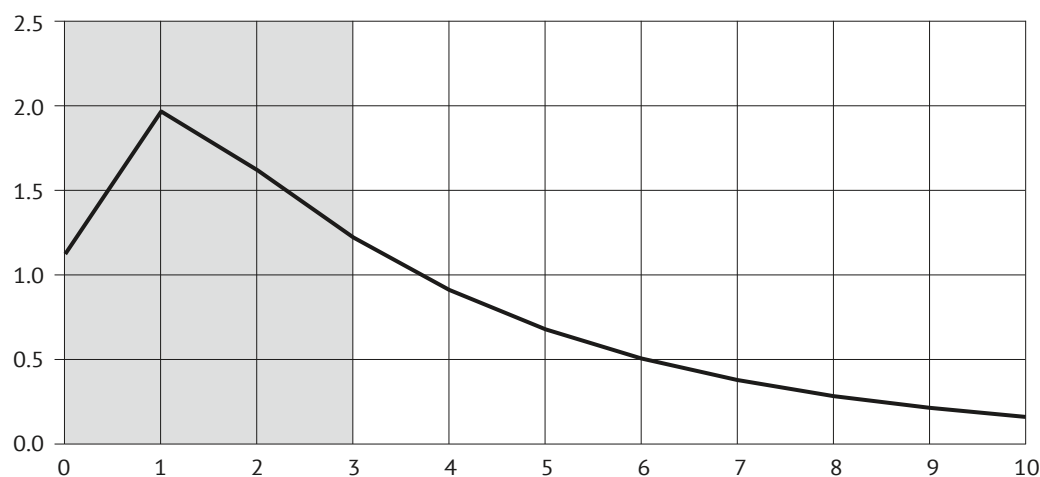
which means more effective management and governance of fiscal stimulus policies. On the other hand, in less developed economies, more cash flows are expected to leak out of the system due to poor project management skills and less developed institutional framework or possibly due to increased corruption risks.

In Figures 10 and 11, the results show a certain influence of the membership of countries in the political integration on the size of fiscal multiplier. Prior to joining the European Union, countries recorded a statistically significant output response to a positive shock in government consumption over the first two years. The values of the estimated fiscal multiplier are lower than unity throughout the horizon. In the case of member states, however, the values of a fiscal multiplier exceed unity and are also statistically significantly different from zero within the first two years, with the highest value reaching

directly after the introduction of shock in government consumption, amounting to slightly above 2.0. Then, the value of the fiscal multiplier gradually decreases and approaches zero after six years. A possible economic interpretation of higher fiscal multiplier in the case of countries' inclusion in political integration may be in a better and more stable institutional framework for the overall integration as a whole and, consequently, also for the member states themselves. Countries within the European Union are therefore forced to implement projects transparently and efficiently; otherwise, the supranational authority can penalize any wrongdoings. Similarly, before joining the European integration, countries were forced to fulfill a number of challenging entry criteria in the field of fiscal issues.

The analysis of the impact of country membership in monetary integration on the size of a fiscal multiplier has

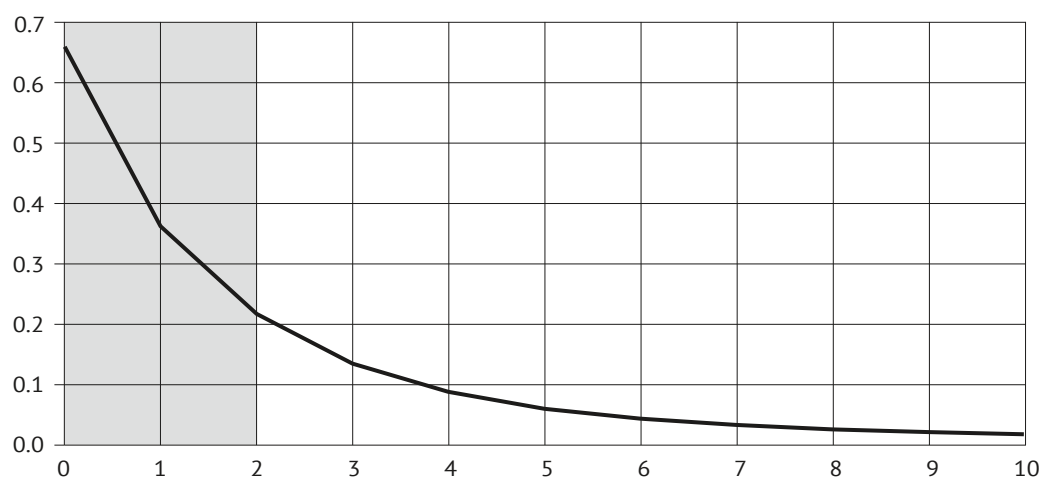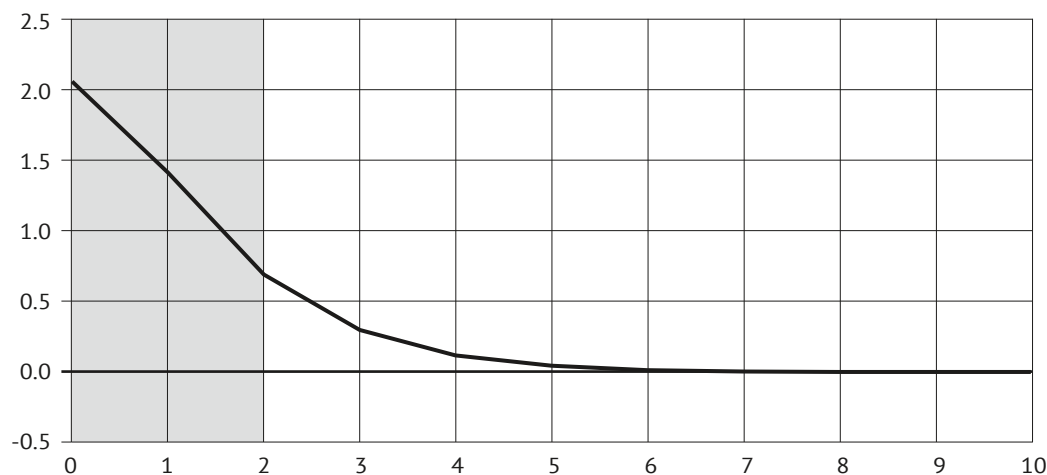**Figure 10.** Fiscal Multiplier for the Group of Non-EU Members

Figure 11. Fiscal Multiplier for the Group of EU Members

parallels with the previously described effect of the participation in political integration. Figure 12 shows that the estimated values of fiscal multiplier are statistically significantly different from zero within the first three years, reaching the maximum value immediately after the introduction of shock, namely, the value is 1.2. Then, the values of the fiscal multiplier gradually converge to zero. If the countries were included in the Economic and Monetary Union, we estimate the relatively higher values of the fiscal multiplier (Figure 13). In this case, the output response to shock in government consumption is statistically significant only within the first year with the maximum observed value of 1.6.

Stronger and more developed institutional framework with an even higher degree of economic integration demands from EMU member states higher standards in the

functioning of economic policy. A single central bank that forms a common monetary policy and overviews economic conditions of the entire Euro Area can also have a positive effect on the efficiency of fiscal incentives. The explanation for this phenomenon lies in more stable prices and interest rates, which make fiscal policy more robust and resistant, as financial markets recognize individual member states as being less risky because of their membership in a monetary union. There is also a fixed exchange rate within the EMU, which provides additional soundness into the system.

The economic crisis hit the global economic system in 2008 drastically and was considered as the biggest contraction since the Great Depression in the 1930s. The results of our research show that estimated values of fiscal multiplier during the off-recession period are lower compared with the values of fiscal multiplier during a major recession.

Figure 12. Fiscal Multiplier for the Group of Non-EMU Members
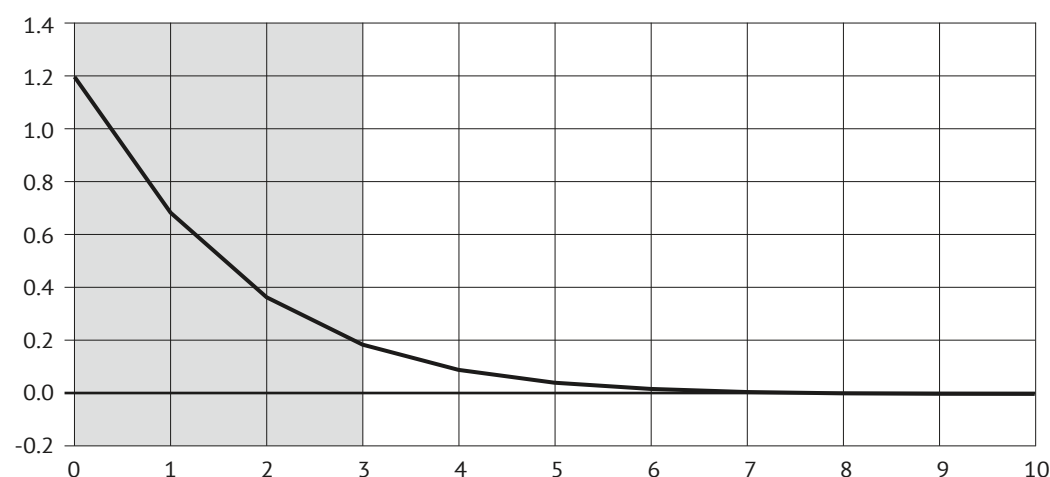

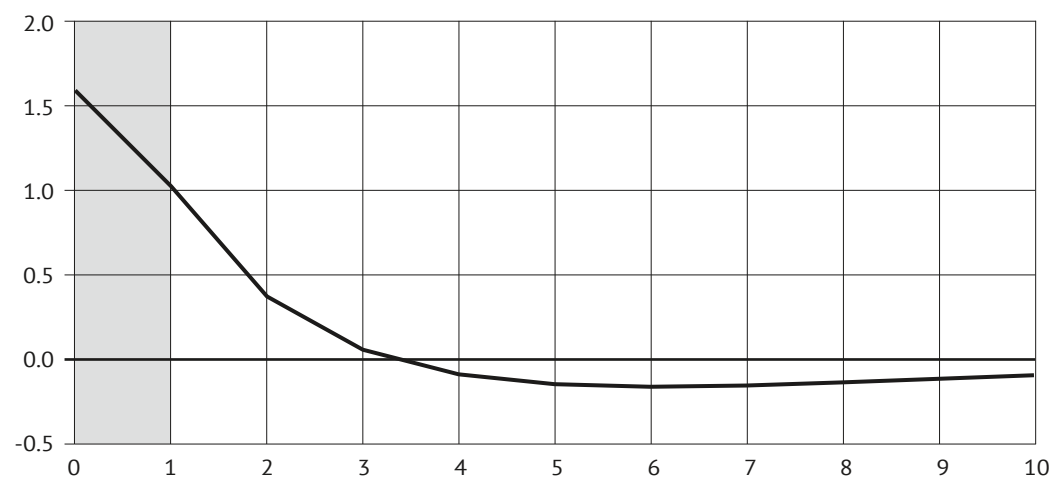**Figure 13.** Fiscal Multiplier for the Group of EMU Members

Figure 14 shows that, in normal time, the fiscal multiplier reaches the highest value immediately after the shock, when it amounts to 0.95. The response of the output to a positive shock in government consumption is statistically significantly different from zero within the first five years; after the first year, a gradual decline in the value of the multiplier is also observed. During the duration of a major recession (Figure 15), the fiscal multiplier is estimated at a value of 2.0 immediately after the shock, which rapidly falls and then persists around zero in the negative area. The fiscal multiplier is statistically significantly different from

zero only on the impact. The reason for the higher value of the short-term multiplier during a major recession can be hidden mainly in the underutilization of the economy and in the zero lower bound. Consequently, any additional spending, in our case, an increase in government consumption has a beneficial effect on economic activity. However, in the context of the recession, which is usually accompanied by a loose monetary policy, interest rates persist for a long time on a low level, which gives a fiscal policy additional maneuvering space for issuing more government securities at low cost.

Figure 14. Fiscal Multiplier in the Off-Recession Period
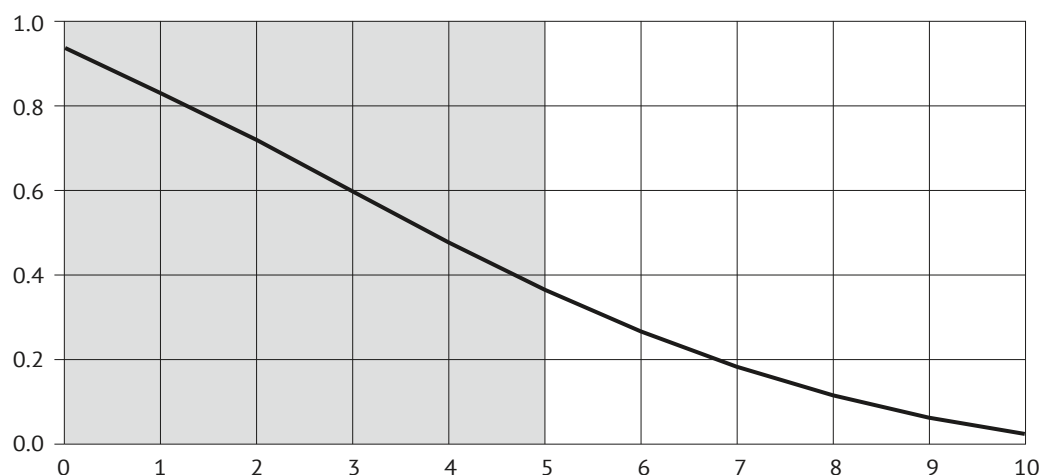
Figure 15. Fiscal Multiplier in the Period of Great Recession
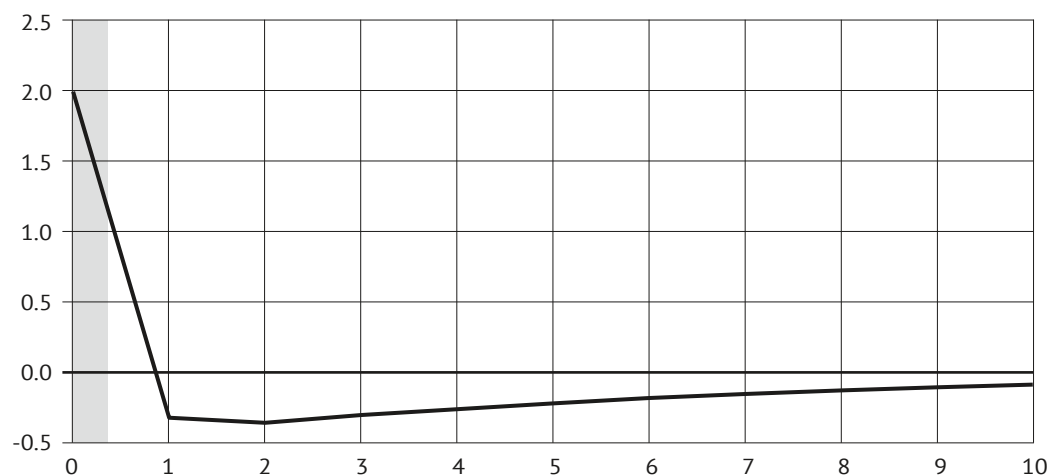
Conclusions

Building a broad consensus in the field of understanding the role of countercyclical fiscal policy in boosting economic growth during the slack, our study expands and updates the existing empirical literature. In this paper, we estimate the government consumption multiplier based on a panel VAR

model for a sample of EU countries between 1995–2017 and examine the effect of various characteristics of the countries on the size of fiscal multiplier. We check whether the level of public indebtedness, trade openness, financial openness, level of development, membership in trade and monetary integration, and era of the Great Recession affect the size of fiscal multiplier. Core results are summarized in Table 1.

Table 1. Summary Results

Characteristics	Influence on the Size of Fiscal Multipliers
Level of public indebtedness	-
Trade openness	Inconclusive
Financial openness	+
Level of development	+
Membership in EU	+
Membership in EMU	+
Period of Great Recession	Higher multiplier; shorter impact

Notes: +/– represents positive or negative impact of the country's characteristic on the size of fiscal multiplier, respectively.

Our study indicates higher values of fiscal multiplier in periods of lower public indebtedness and in cases of more developed economies, which corroborates the findings of Ilzetzki et al. (2013), Hory (2016), and Koh (2017). Results regarding financial openness suggest higher values of multiplier in more financially open European economies. This is not strictly in line with economic theory, but Koh (2017) provides an argument of support based on easier access to financial markets and therefore better options for financing additional expenditures. Rather contradictory results occur in the case of trade openness, where the direct effect of additional government consumption is higher in more open economies though is less persistent at the same time. These findings are in line with those in Koh (2017) but contradict those in Ilzetzki et al. (2013), Combes et al. (2016), and Hory (2016). As at least partly expected, we discovered higher immediate output effect in the period of the Great Recession, but the effect quickly diminishes to zero. Membership of the countries in supranational integrations, according to our estimates, helps countries to gain more efficient use of public expenditures in terms of boosting short-term economic growth.

Despite scrutinizing a large number of characteristics of fiscal multipliers in this paper, there is still room for upgrading our research in adding into consideration more factors such as exchange-rate regime, labour market features, private indebtedness, and income inequality. With broadening the list of relevant factors, we will gradually improve the understanding of the transmission mechanism of the fiscal stimuli, which can significantly improve the effectiveness of stimulative fiscal measures.

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Ocena multiplikatorja vladne potrošnje v gospodarstvih EU

Izvleček

Namen tega članka je oceniti multiplikator vladne potrošnje na panelu držav EU in preveriti vpliv izbranih karakteristik držav na višino fiskalnega multiplikatorja. Na vzorcu 28 držav EU, ki zaobjema obdobje 1995-2017, apliciramo panelni VAR model, pri čemer sledimo Ilzetzkiju idr. (2013). Ugotavljamo, da je ocenjen povprečni multiplikator vladne potrošnje večji od ena in da je fiskalni multiplikator višji v primeru nižje ravni javne zadolženosti, v bolj razvitih državah in v finančno bolj odprtih gospodarstvih. Učinek trgovinske odprtosti držav na višino fiskalnega multiplikatorja je nejasen. Prav tako ugotavljamo pozitivno odvisnost višine multiplikatorja vladne potrošnje od članstva držav v evropskih integracijah. Na podlagi rezultatov lahko sklepamo, da je za nosilce fiskalne politike smiselna selektivna uporaba fiskalnih spodbud pri uravnavanju kratkoročne gospodarske aktivnosti. Naš članek ažurira obstoječo empirično literaturo in oceni vpliv dodatnih, manj raziskanih karakteristik držav na velikost fiskalnega multiplikatorja.

Ključne besede: karakteristike držav, fiskalni multiplikator, panelni VAR

Quo vadis Farmer Sales? The Experience of a Survey in Hungary

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Abstract

Direct sales by farmers gained acceptance in Hungary following the incursion of healthy eating and the enhancement of local economic development efforts. Conducting questionnaire surveys and interviews, our research investigated the means through which locally produced goods reach consumers, e.g., short food supply chains, as well as the farmers' motivations and the necessary developments. According to the main results, personal direct consumer relations are vital for local farmers; however, advanced sales channels are not popular nor fully developed in Hungary. Only the capital city shows some development here, catalysing and stimulating the domestic market and consumer behaviour. On the other hand, the age structure of local farmers or the lack of knowledge hinder the advent of advanced sales channels. Nevertheless, there is a continuous and immanent need for development in this sector; although, the recent conditions of subsidies unfortunately do not support small scale local farmers.

Keywords: short food supply chains, local farmers, direct sales, foodstuff communities

Introduction

In the past decades, global commodities, as established by leading multinational companies, have enabled access to food from just about any point in the world. Beyond sustainability and environmental problems, these so-called global "agro-food regimes" or "systems of provision" raise the questions of the origin of food and, thus, their composition, producing, and processing (Whatmore, Thorne, 2008). While one of the foundations of a consumer society is the easy and high-quantity

access to food, in the course of the conscious, or ethical, consumption, there is an ever-growing need for high-quality, environmentally produced, possibly local food containing natural ingredients. Local supply chains were thus put in the centre of attention (Low et al., 2015; O'Hara, Pirog, 2013). Considering its history, direct sales live their renaissance both globally and in Hungary because small-scale farmers are able to meet such increasing market demands with their high added-value goods, which global supply chains are incapable of (Galli, Brunori, 2013; Kneafsey et al., 2013).

The main aims of the study were to measure the channels small-scale farmers use to sell their products in the Hungarian context. Regarding our hypotheses, developed forms of direct sales are not widespread among Hungarian farmers, except for in the local markets. The authors deemed it important to analyse the arising needs in order to make direct sales more efficient and viable as well as the development of ideas local goods producers have in Hungary.

Local Food Trends: Indirect and Direct Sales Forms

Research was conducted in regard to the definition of local and short food supply chains in the international and in the related Hungarian literature (Marsden, 2000; Murdoch et al., 2000; Renting et al., 2003; Nihous, 2008; Balázs, 2012; Juhász, 2012). Several definitions, such as alternative, local, or new food chains/networks, are known. The term "short food supply chain" (SFSC) is generally used in the European Union. In accordance with the definition of Renting et al. (2003) in the case of short food supply chains, there is a direct and mutual contact among the participants with the aim of producing, processing, selling, and consumption of food. Murdoch et al. (2000) describe the renewal of the food supply system where bottom-up cooperation is the driving force behind it.

Based on the above notions, the main point of the short food supply chain is the shortening of communication and contact between producers and consumers, and there is a minimal number of mediatory organisations. Participants organise themselves in networks or communities with the aim of fostering direct sales of food production in competitive quantity and excellent quality, along with the popularisation of conscious purchasing and the strengthening of producer cooperation.

Several sales channels can be differentiated, i.e., traditional market sales, on-farm sales, or the more modern, community participation-based systems (e.g., community supported agriculture – CSA, box schemes, etc.), which are already popular in the USA and Western Europe (Berti, Mulligan,

2016; EPRS, 2016). It is characteristic, then, that farmers use several sales methods at the same time (Ilbery et al., 2006). However, the participation of small producers in advanced commodity chains is rather low in Hungary at the moment (Szabó, 2014).

The most wide-spread channels of direct sales in Hungary are traditional and farmers' markets (Juhász et al., 2012; Csikné Mácsai, 2014; Kujáni, 2014; Szabó, 2017). The most striking difference between these forms of sales in the Hungarian practice are the following: while traders can appear on the traditional markets with their wholesale goods (not only food-like, but any product can be sold), farmers' markets only allow small producers to sell the products they produced and processed themselves. There is also a difference in regional limitations. According to the legislation producers, selling their own goods at farmers' markets must operate in the given county or within a catchment area of 40 km; however, in the case of traditional markets, there is no such limitation. Products can be delivered to Budapest, the capital of Hungary, from all over the country. However, the international borders are barriers for this activity; sales in the neighbouring countries are too expensive for local producers and hindered by the legal environment.

There is a continuous decline in the turnover and visitor numbers of traditional markets, and there is also a change in the range of their customers. The rate of visitors dropped from 72% (2010) to 59% (2016). This drop back is mainly the result of the lack of buyers from outside the capital seat, while the number of households from Budapest frequenting these events can be considered as stable (GFK, 2016). The turnover of markets has been taken over by discount chains and hyper – and supermarkets. The decrease of the shares of markets for everyday consumer goods can be led back to the fact that buyers wish to do their shopping in one place in a simple and quicker way.

Following the favourable legislation and subsidy policy environment, along with the advance of local products, there is national growth in the number of farmers' markets in Hungary (Szabó, 2014). The Hungarian Program for Rural Development devoted € 2.767m for the support of agricultural production and food processing. Accordingly, similar EU-funded or national grants for rural development will be hereafter considered as subsidies in the paper. Szabó (2017) showed, using the registers of the Hungarian Chamber of Agriculture, that 118 markets were registered as farmers' market in the year 2012; by the year 2018, this number increased to 256. The spreading of farmers' markets was bolstered by the increase of consumer needs (Szabó, 2014) and the local and EU subsidy systems. Visitors to farmers' markets are younger and more educated consumers who favour healthy and domestic products. As a result of the

change of consumer attitudes, there are buyers whose responsible decisions are made with due respect to the positive impacts of their own health and the health of their families as well as to the local economy, community, and environmental sustainability. This group of consumers particularly favour locally produced foods and direct sales channels (Chambers et al., 2007; Póla, 2014; Gonda, 2014; Gulyás, 2017). The fresh, local goods, the unusual regional variants, friendly chats, and the multitude of people mean more than just buying for many people; it is an experience that makes the next farmers' market a worthy visit (Hunt, 2007; Robinson, Farmer, 2017).

This group of solvent consumers who make their decisions consciously are important when it comes to the spreading of more modern direct sales channels. There are more and more online purchaser communities, and there are some vegetable-box schemes in Hungary (Benedek, 2014). According to a survey[1] of the Hungarian Association of Conscious Buyers, there were at least 17 community-supported agricultural groups (CSA)[2] and five box schemes[3] in Hungary in the year 2017; further, 47% of the CSAs, 80% of the box schemes, and 15% of the purchaser communities delivered goods to Budapest, which shows the strong dominance of the city (Table 1).

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[1] https://tudatosvasarlo.hu/cikk/mukodo-kozossegi-mezogazdasagi-csoportok-bevasarlokozossegek

[2] According to the US Department of Agriculture, a CSA consists of a community of individuals who pledge support to a farm operation so that the farmland becomes, either legally or philosophically, the community's farm, with the growers and consumers providing mutual support and sharing the risks and benefits of food production (Woods et al., 2017).

[3] The definition of shopping communities and box schemes originates from the CSA. In the case of box schemes, the shopper purchases a box of goods every week, or a defined period of time, which was produced at the given farm. Consumer commitment is smaller in this case because the decision can be made to buy the box or not. In the case of buyer communities, consumers can decide what and how much to purchase at a given time on the basis of a list.

[4] A vending machine is an automated machine that provides products, typically fresh milk, from local producers, located in several points of the city.

Research in Hungary dealt with the mapping of various direct sales fields (Juhász et al., 2012; Csikné Mácsai, 2014; Kujáni, 2014; Benedek-Balázs, 2016; Szabó, 2017). The presence of the modern sales channels among small-scale farmers was analysed in the course of the present study.

Methodology

In the course of the research, we involved the entire area of Hungary. We received 118 assessable questionnaires filled in by small-scale farmers active in the field of producing local goods of food. The survey was conducted between March 2016 and June 2016. The questionnaire contained 26 questions, which were forwarded via social media (Facebook) and contact addresses received from vocational associations. Some questionnaires (11) were conducted by the authors *in situ* at traditional and farmers' markets (Table 2). Furthermore, we interviewed a few market organizers and intermediate actors selling local products (6).

Younger farmers with a higher level of education were over-represented assumedly because of the online questionnaire form. This equals the general practice, as international research shows that farmers of short food supply chain sales are younger than the average and have a higher level of education (Martinez et al., 2010).

The vast majority of respondents pursue their activities as agricultural producers[5] (66%), i.e., 14% as family farms,[6] 12% as individual entrepreneurs, while the remaining 8% were for-profit and nonprofit economic organisations

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[5] In accordance with the Hungarian law, an agricultural producer is a private person above the age of 16 who is not an individual entrepreneur and who carries out activities to produce given goods in their individual field of agriculture.

[6] In accordance with the Hungarian law, an enterprise utilising a maximum of 300 hectares of arable land, occupying at least one family member, and enlisting the contribution of the other family members is a family farm.

Table 1. Traditional and Modern Kinds of Direct Sales Channels

Traditional Direct Sales Channels	Modern, Direct Sales Channels
traditional town markets	farmers' market
fair	festival
on-farm sale	community supported agriculture
own guesthouse	online shopping communities, shopping bag-like
own shop	sales
Pick your own fruit!	operating one's own web shop
street-selling	vegetable box schemes, weekly shopping bag
	vending machine[4]
mobile delivery	
home delivery	

Source: HRDP (2015), Short Supply Chain Thematic Subprogram, p. 78 (edited by the authors)

Table 2. Distribution of the Sample According to Gender, Age, Education, and Form of Agriculture

		Number of Answers	Proportion
Gender	male	67	56.8%
	female	51	43.2%
Age	under 35 years	18	15.3%
	36-45 years	40	33.9%
	46-55 years	34	28.7%
	56-65 years	19	16.1%
	over 65 years	7	5.9%
Education	elementary	2	1.7%
	intermediate, but not agricultural	25	21.2%
	intermediate, agricultural	25	21.2%
	degree, but not agricultural	38	32.2%
	degree, agricultural	28	23.7%
Form of agriculture[8]	animal farming	37	17.0%
	vegetable farming	53	24.3%
	fruit farming	53	24.3%
	gardening	30	13.8%
	viticulture	21	9.6%
	silviculture	4	1.8%
	apiary	20	9.2%

and small producers.[7] Small-scale farmers constituted the majority of the respondents who occupied themselves with agriculture as a complementary activity.

The authors received assessable answers from all Hungarian counties. Two small border settlements from Slovakia, mainly with an ethnic Hungarian population, also submitted filled-in forms. We considered these as relevant data because native Hungarian producers usually sell their products on the Hungarian side of the border (as it came out during the personal survey). However, on the basis of the above-mentioned notions, the survey cannot be considered as representative; thus, conclusions could only be drawn on the basis of our sample.

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[7] A natural person who sells his/her basic products and the goods produced thereof originating from one's own farm by upholding quantity-based and territorial limitations to end-consumers on-farm, at markets, fairs, events, or are parts of small-trade and catering units, which sell his or her products directly to consumers are considered small producers.

[8] Some farmers are cultivating simultaneously more forms of agriculture; therefore, we received 218 answers and not only 118.

Results

Sales Channels

The sample-based research of direct sales resulted in the on-farm direct sale to the consumer to be the most popular form; 76.3% of the respondents mentioned they sold their goods this way. This was followed by the traditional market sale (39.8%), and home-delivery (28.8%). It was interesting to see that only eight farmers (6.8%) sold their products within the frame of the previously popular "Pick your own products" form. Respondents were able to mark several options, and the above-mentioned forms are the most popular, i.e., traditional sales forms. Hence, own shops and own guesthouses are not, i.e., not characteristic among respondents (Figure 1).

The advanced means of direct sales, except for the local markets, are less widespread among the interviewed farmers (Figure 2). Even though the sample contains the widely disputed community-supported agriculture (two farmers) and the box schemes (nine farmers), which are popular abroad; however, as the chart shows, only a small part of their profit is generated via these channels (apart

Figure 1. Traditional Direct Sales Channels among the Respondents, in Ratio Groups of Total Sales, % of Respondents
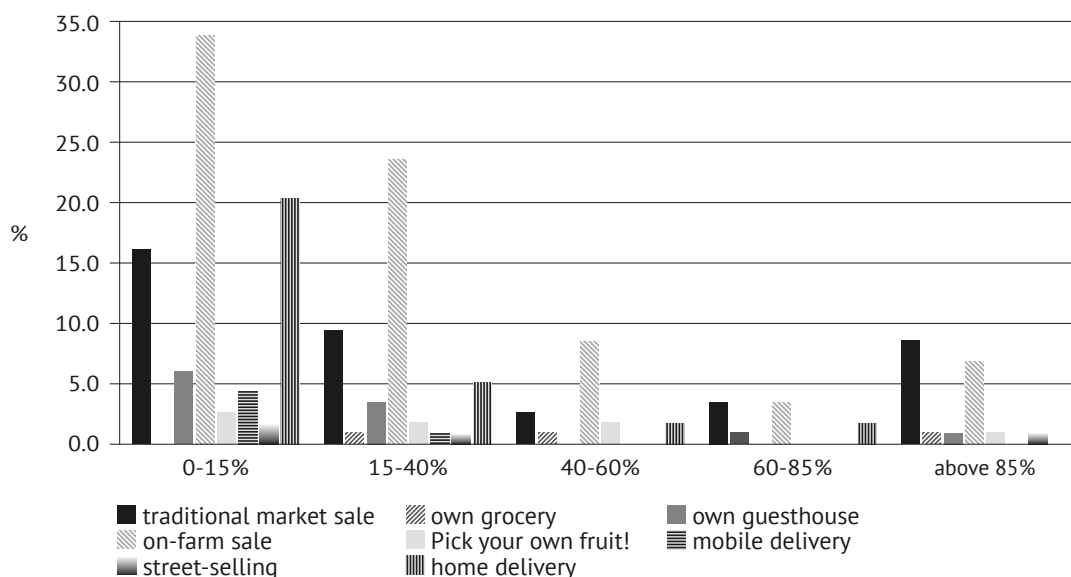
Figure 2. Advanced Direct Sales Channels among the Respondents in Ratio Groups of Total Sales, % of Respondents
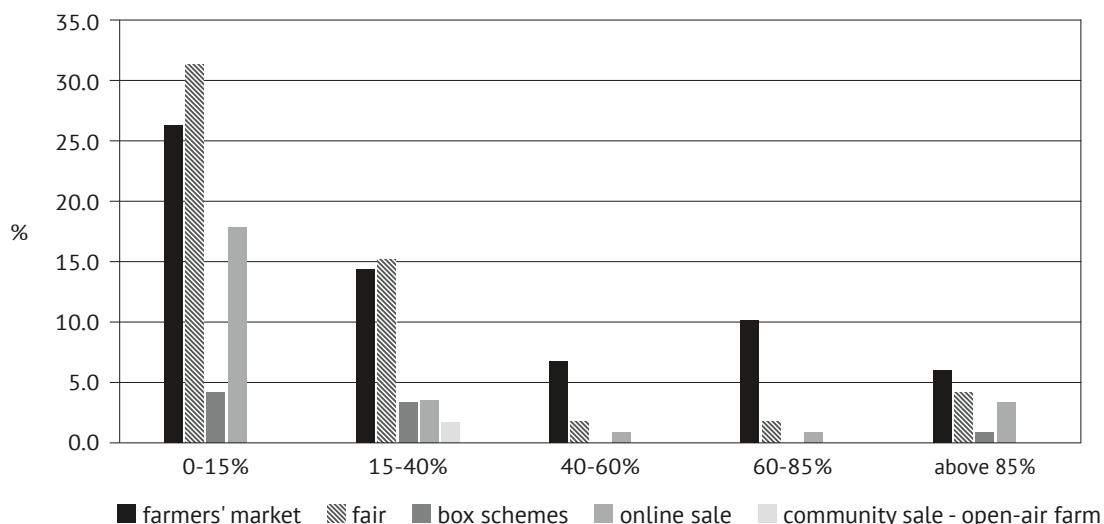
from one farmer). None of the 118 respondents sell their goods from vending machines.

The interviewed farmers do not almost sell to Hungarian – or foreign-owned warehouses or discount chains. The main reason hereof is the insufficient amount of goods produced to meet the demands of those purchasers.

The survey also investigated why farmers opt for direct sales (Figure 3). It is an important aspect of each profit-oriented activity; just like with direct sales, farmers should be able to provide a living for themselves and their families (40.7%). At the same time, the greatest motivation of the respondents was to personally give the customer their carefully produced goods (45.8%); hence, this came before a profit-gaining

motivation. It is typical for small-scale farmers to engage in these activities parallel to their primary occupation. The respondents considered it as their almost sacred mission to put healthy, traditionally produced goods onto the tables of their customers. They often launched their sales to meet a specific consumer demand. These farmers had scarce access to these subsidies; hence, the motivation of EU-subsidies was almost noninfluential (77.1%) when they started their activities and also at the time of responding to the survey. The less-strict quality requirements toward small-scale production goods (72%) were not seen as motivation, either; therefore, this was not the reason for choosing direct sales. However, the authors were confirmed that producing quality goods is of importance. It was also interesting to note that continuing family traditions was also listed among the nondefining motivating factors.

Figure 3. Factors Influencing the Initiation of Direct Sales, %
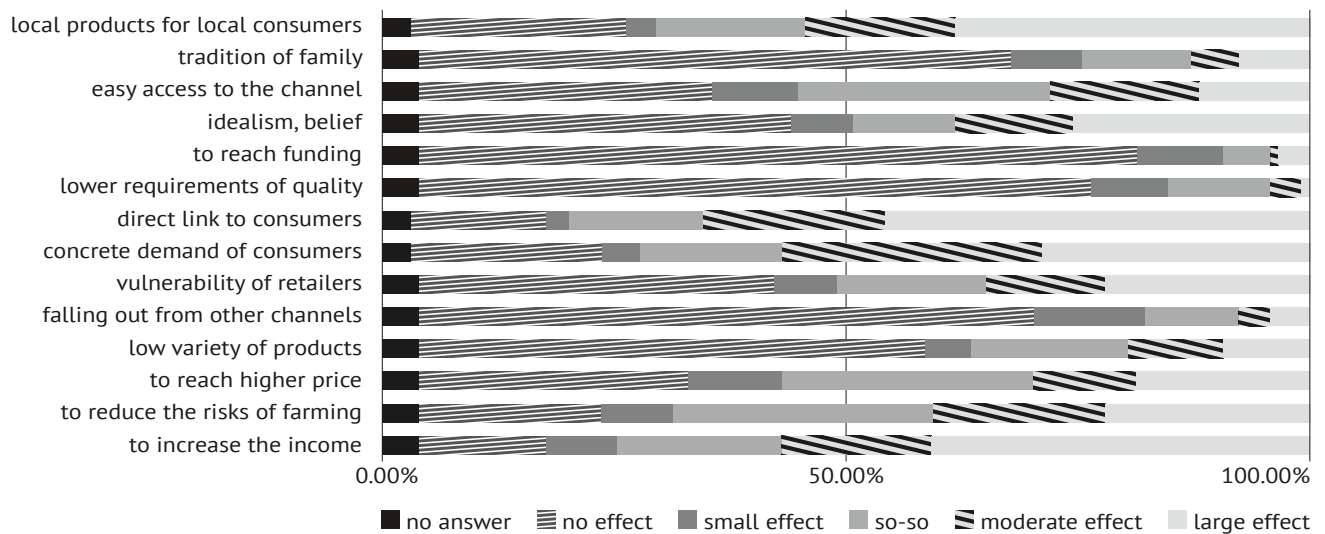
The interviewed farmers were open to the use of modern marketing methods; 50% already have a homepage, and 42% have regularly been posting Internet advertisements. Advertising on fliers (33.9%) and social media (33.1%) were also favoured forms of advertising; 18.6% appeared in a local farmers' publication; 14% advertised on the webpage of a mediatory organisation; and 14% joined local product trademarks. It could also be observed that the process has started, which guides farmers toward a short food supply chain coordinating civil organisation (SFSCs-organiser), so that their activities and market-presence can be more efficient. At the same time, the vast majority of the interviewees did not utilise external assistance in the form of legal assistance, or EU subsidies in order to launch or sustain direct sales. The rate of farmers who still did not use marketing tools at all is high (22%). This can be for several reasons: on the one hand, there is no need for it because of the small quantity of products, as produced goods can be sold; on the other hand, farmers also have to combat a continuous lack of capacities (financial, human resources).

Development Ideas, Farmer Needs

Farmers were also asked about their development ideas for the next five to 10 years. Almost 10% of the respondents do not plan a development in the future. There are several reasons behind this: on the one hand, several respondents do not wish to develop their farms because of their age; on the other hand, they are satisfied with the present profitability, or they are about to reach the end of their capacities. The innovation capacity and tool development ideas are minimal, assumedly because of the small-scale complementary activity. Thus, only 13.8% of respondents plan a technological

modernisation, automatization, and an increase of production capacities (e.g., expanding the number of livestock, planting crops, purchasing new land). Nearly 10% of the sample plan to purchase tools and characteristically wish to utilise subsidies. Farmers in the sample also mentioned the search for new marketing channels and the expansion of the buyers' range (7.9%) and a more intensified marketing activity (5.9%) among their goals. The development ideas included the stability of the farms and diversification of income sources and of activities (starting catering, creating rural tourism and show-farms). The idea of recruiting a new workforce was not characteristic (1.3%).

According to the farmers' suggestions to increase efficiency of direct sales, it became obvious that respondents consider the intensive and targeted marketing activity as the most important tool. This was followed by emphasis on the importance of consumer mind-framing as well as the restoration and increase of customer trust. Marketing was, in many cases, deemed important because of mind-framing. National campaigns were believed to be useful to draw the attention to the consumption of local goods from economical, health, and environmental aspects. The suggestions on efficiency increase made by farmers included the reduction of bureaucracy and a re-thinking and easing of regulations related to farmers and the strengthening of cooperation and establishing SFSC groups among farmers. Less than 10% of respondents believed that local markets are not run appropriately, as traders often appear to mislead consumers and can undermine the easy-to-shatter trust into local products. Many of the respondents thought that calls and state subsidies do not provide a solution for bolstering direct sales (Figure 4).

Fourteen percent of respondents were of the opinion that there is absolutely no need of subsidies for sustaining or

Figure 4. Farmers' Suggestions to Increase Efficiency of Direct Sales
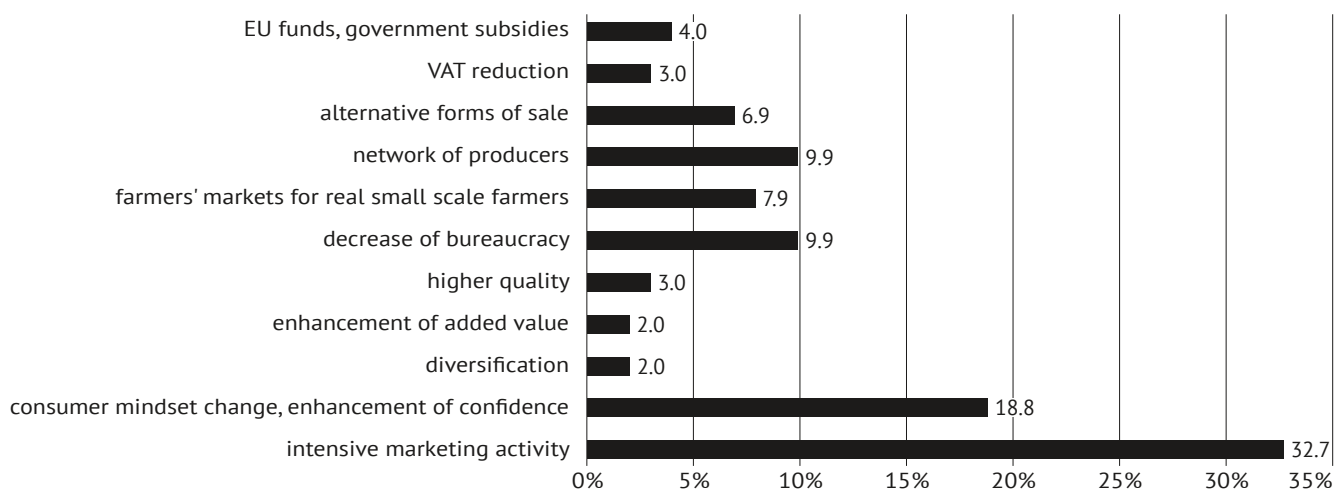
Figure 5. Farmers' Suggestions about the Forms of Subsidies Necessary to Increase Viability
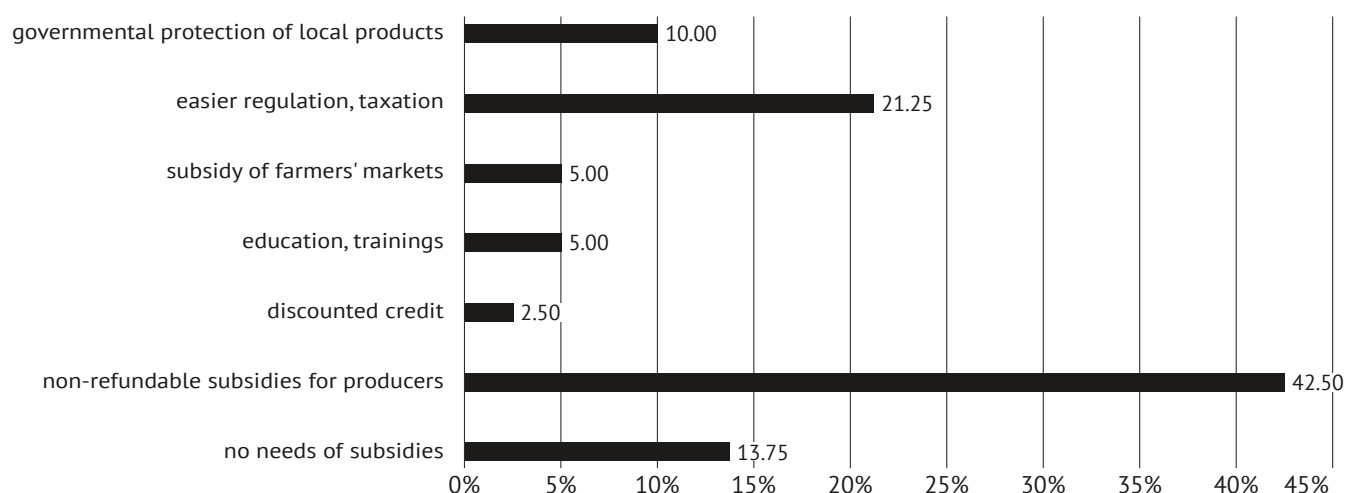
improving their viability (Figure 5); 43% believed that subsidies should be rearranged to make them available and suitable for small-scale farmers. Participants in the survey did not have access to the present calls in most cases. Reducing the administration burdens and a simple access would be important. The applications should include the possibility to purchase used tools; further, low-budget projects (€ 300 – 500) should also become implementable. Farmers with land less than 1 hectare should also be able to receive subsidies. Approximately 17% of the respondents believed that present regulations hinder their operation or even make it impossible; 10% believed that the protection and the positive discrimination of domestic products can help on a national level against imported goods. Education programs for local farmers, creation of further local markets, or the support

of on-farm selling practices can also improve the viability of the farmers; however, these options were seldom considered (5% – 5%).

Conclusions

Based on the survey, we underscore that selling on local markets and on-farm scale are the most widespread methods of direct sales among the questioned farmers. The establishment of direct, personal contacts to the consumers is a major factor behind launching an enterprise, i.e., Hungarian small-scale farmers are keen to sell on markets and on-farm to react to consumer demands and consider it important to bring their goods to local inhabitants.

The change of perspective among consumers and farmers is inevitable to boost the local food supply. Considering the advanced forms of selling, like community farms, box schemes, and online shopping communities, Hungary is lagging behind compared with the rest of Europe. Operating communities can be found in larger cities and Budapest, which draw away the farmers who are prepared and open to alternative means of selling from local direct sales channels. Hence and paradoxically, the principle of "local food for local people" is rarely met; peripheral rural areas could be sometimes considered as rural "food deserts," as one form of environmental or food justice. The level of consumer consciousness necessary for the long-term sustainability of shopping communities based on loose farmer–consumer relations, requiring less commitment, can only be regarded as appropriate in Budapest.

However, it is also important to note that farmers are also not fully prepared and open to answering the question. Elderly farmers working in the field as a complementary activity favour rather traditional markets and on-farm selling. They do not have the proper knowledge in many cases about the conditions and pitfalls of starting and operating new forms of selling. Subsidies relevant to these activities are either inaccessible to them, or they fear to utilise them (mainly because of administrative burden and the fear of overextension). They also characteristically do not see the solution of bolstering direct sales but consider the coordinated and intensive marketing to be more important.

The importance of the moderator and aspect-shaping role of cooperating organisations is obvious. Conditions for the spread of advanced, direct sales channels is created and sustained by civil organisations, local governments, or perhaps by the entrepreneurs. Development policy has allocated vast EU resources to the domestic adaptation of the SFSCs concept and the development of local farmers and selling channels. Calls, however, must be built on the needs of those involved in order to a proper utilisation of the subsidies. It is a question of whether Hungarian small-scale farmers are capable of utilising EU subsidies and whether rural development subsidies can be matched with the demands in a way that the capacities, knowledge, and openness of small-scale farmers toward the direct sales can be expanded.

Acknowledgment

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Kam greš, prodaja kmetovalcev? – Izkušnja anketiranja na Madžarskem

Izvleček

Neposredna prodaja kmetovalcev je na Madžarskem pridobila pomen, kar je sledilo poudarjanju zdravega prehranjevanja in krepitvi prizadevanj za lokalni ekonomski razvoj. V svoji raziskavi smo z anketami in intervjuji proučevali načine, s katerimi lokalno proizvedeno blago doseže potrošnike (npr. kratke oskrbne verige s prehrano) kot tudi spodbude kmetovalcev in potreben napredek. Glede na ključne izsledke so osebni, neposredni odnosi s potrošniki bistvenega pomena za lokalne kmetovalce, medtem ko napredni prodajni kanali na Madžarskem niso razširjeni in razviti. Na tem področju kaže nekaj napredka samo glavno mesto, ki katalizira in spodbuja domači trg in vedenje potrošnikov. Po drugi strani pa starostna struktura lokalnih kmetovalcev in pomanjkanje znanja otežujeta nastanek naprednih prodajnih kanalov. Kakorkoli, obstaja kontinuirana in imanentna potreba po razvoju v tem sektorju, čeprav trenutni pogoji subvencij na žalost ne podpirajo malih lokalnih kmetovalcev.

Ključne besede: kratke oskrbne verige s prehrano, lokalni kmetovalci, neposredna prodaja, živilske skupnosti

Knowledge Management Components and Their Impact on Work Engagement of Employees

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Abstract

In light of globalization and modern business, companies are typically exposed to challenges caused by unpredictable and complex competitive environments. The business environment, with global trends and stringent competition in the world market, now faces significant changes that companies should introduce into their current business operations. Among them, the human resource management of knowledge employees has become extremely important. The main aim of this article is to establish the impact of components of knowledge management on work engagement of employees in Slovenian companies. In the empirical part of the research, a sample of 112 Slovenian companies was obtained. Senior managers of companies and their employees were surveyed, using the questionnaire developed based on existing measurement scales. The results will help us to better understand the importance of knowledge management in Slovenian companies and its importance as a business strategy that must be fully integrated within all of the employees' related processes of the company.

Keywords: knowledge management, knowledge management components, employees

Introduction

Knowledge is an important issue for business organisations. Knowledge management is defined by Tan (2000) as "The process of systematically and actively managing and leveraging the stores of knowledge in an organization." According to Armstrong (2014), knowledge management is concerned with storing and sharing the wisdom, understanding, and expertise accumulated in an enterprise about its processes, techniques, and operations. It treats knowledge as a key resource. Knowledge management is about the management and motivation of

knowledge workers who create knowledge and will be key for business success. Yeh et al. (2006) summarize that employees are the core for creating organizational knowledge; therefore, it is crucial to manage employees to create and share that knowledge. A key element for an enterprise to be successful in pushing knowledge management is the process to encourage people to communicate and share their knowledge with others. Therefore, organizations should view employees as their most important knowledge resource; further, the concept of knowledge management should be integrated into employee management policies because it is crucial for an employee to be willing and enthusiastically motivated to participate and engage in the obtaining and sharing of knowledge. Good working conditions increase employees' willingness to participate in the creation and sharing of knowledge. Also, the educational training of all employees is another key factor for knowledge management.

Knowledge management is a discipline that promotes an integrated approach to identifying, capturing, evaluating, retrieving, and sharing all of an enterprise's information assets. In a company, it is essential to ensure good working conditions, if that company wishes to maintain an agile, productive, and innovative working environment (Gao et al., 2008). Albrecht (2012) argues that, to motivate and engage employees, organizations should create open, supportive, and fair organizational and team culture and ensure that jobs are clearly aligned with organizational goals and have the appropriate levels of autonomy, support, and career development opportunities.

In a knowledge-based economy, it is extremely important to properly manage employees who have a major impact on the future of the organization, namely, knowledge employees. Managing these employees in such a manner as to win their full engagement in work is a true challenge for the organization where they work and for their superiors. Engaged knowledge employees derive more pleasure from their work, have a sense of realization of their potential, feel that they are doing something important for themselves and the environment, realize their ideas and professional ambitions, go beyond the routine procedures and undertake challenges (Figurska, 2015).

Figurska (2015) summarized that determinants of knowledge employees' engagement are, in order of importance: senior management's interest in employees' well-being, challenging work, decision-making authority, evidence that the company is focused on customers, career advancement opportunities, the company's reputation as a good employer, a collaborative work environment where people work well in teams, resources to get the job done, input on decision making, and a clear vision from senior management about future success.

The main objective of this article is to establish the impact of components of knowledge management on work engagement of knowledge employees. We formulated the following research question: *Do components of knowledge management have a statistically significant impact on work engagement of knowledge employees?*

In this article, a review of the literature is first presented. Then, we present a description of methodology and results. At the end, we present a discussion of the findings.

Literature Review

Knowledge Management

Knowledge management can be defined as the achievement of the organisation's goals by making the factor knowledge productive. This is done primarily by facilitating and motivating people to tap into and develop their capacities (their core competencies) and to stimulate their attitude to intrapreneurship. Besides this, knowledge management includes the entirety of systems with which the information within an organisation can be managed and opened up (Beijerse, 2000). According to Ringel-Bickelmaier and Ringel (2010), knowledge management involves activities related to the capture, use, and sharing of knowledge by the organization. Yeh et al. (2006) stress that knowledge management has a significant influence on business success; further, knowledge management will help a company to maintain its competitive advantage.

Appropriate Approaches of Knowledge Management

Under new work conditions, to create value, every organization has to seek, generate, distribute, and apply knowledge, a function that, instead of being driven by capital, emerges from an environment in which the human spirit is enthused. Only those knowledge companies that develop a work environment that motivates their employees to engage in a behavior consistent with this goal will succeed. These companies will be able to recognize and solve contemporary problems and bring solutions to the marketplace sooner than their competitors who fail to develop such an environment (Amar, 2004). Organizations that desire to use knowledge in their products, processes, and services have to know how to engage the human mind in their operations. From this perspective, adequate working conditions for employees are important (Yeh et al., 2006; Amar, 2004).

To identify factors that determine the level of knowledge employees' engagement, it is worthwhile to get to know their expectations toward the organizations they work in, the nature of the job itself, the superiors, and co-workers. To be highly engaged and effective, a knowledge employee (Figurska, 2015):

- needs to be treated not as a component of the system but as an individual who has his/her own needs, values, opinions, feelings, problems;
- needs to be informed about activities and plans of the company as well as threats and opportunities affecting its functioning, which gives him/her a wider context of the work;
- needs to receive feedback on issues related to his work, thanks to which he knows how his work is evaluated, which of his competences should be developed, etc.;
- expects that his/her professional achievements will be appreciated by managers;
- expects tolerance for making mistakes because mistakes are inextricably connected with human creativity and innovativeness;
- needs to be provided with adequate technical and organizational working conditions that enable him/her to devote the time and effort to activities that generate added value to the organization;
- needs to be provided with the opportunities of professional development because the desire to satisfy this need is a strong motivator for taking (or not) specific activities;
- needs to be engaged in the process of management, so he/she will influence decisions and actions taken in the organization by what this person feels valued and appreciated;
- needs to be independent in making decisions regarding tasks and duties and in performing his/her job;
- needs to be respected as an employee and as a person, so he/she feels comfortable at work;
- expects that work performed by him/her corresponds to the knowledge and skills by which one's potential can be fully exploited;
- needs to be provided with professional challenges at work, so he/she does not fall into a routine;
- expects the lack of excessive bureaucracy, which will help to make his/her professional life much easier and enables one to focus on activities that are important to this him/her as well as bring added value to the organization;
- expects to be treated as a trustworthy person with respect to both him/her as a man or a woman and his/her professional competence, who does not need to be under strict control;
- needs an appropriate working atmosphere, thanks to which the organization becomes a place where he/she wants to go, of which he/she says with pride, and for which he/she wants to do more than just what is necessary;
- expects a high level of competence from the superior, which means that this superior's knowledge, skills, attitudes, and behaviors let employees perceive him/her as a reliable/ responsible/trustworthy, etc. person; and
- expects consistency between his/her remuneration and contribution to the work, i.e., expects financial appreciation.

According to Armstrong (2011), the goal of the organization is to develop its employees. The next step is the identification of employees within the organization, i.e., their development and promotion. Outside the organization, attracting employees is implemented, followed by the selection, employment, and retaining of employees. Employees must be given the ability to learn and develop in new roles and the opportunity to develop their talents. In general, this means creating a pleasant working environment, dealing with employees honestly, recognising their value and enabling them to develop. The goal is that employees are engaged both to the work and to the organization, which leads to employees' engagement.
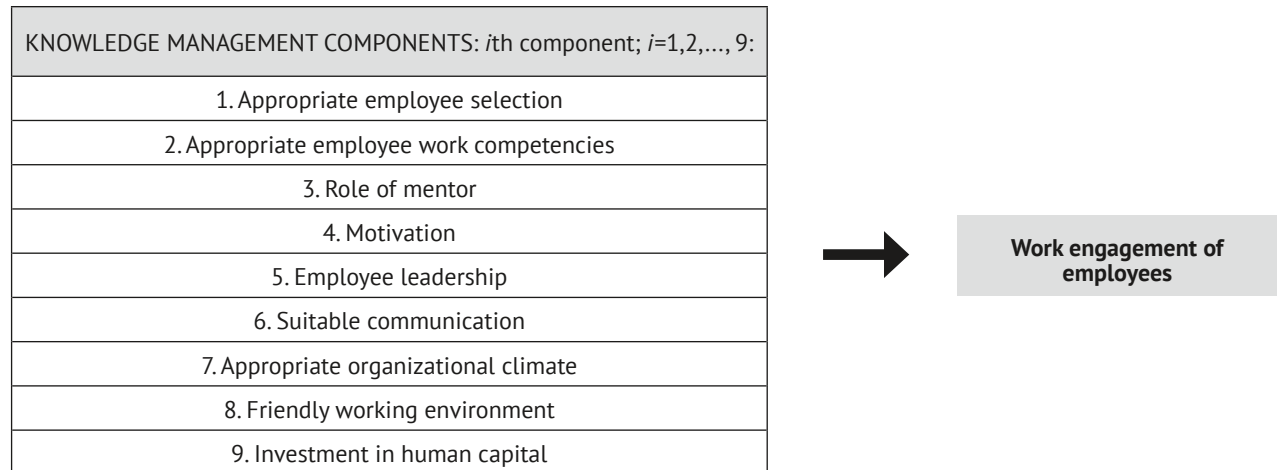
Work Engagement of Employees

The most important result of a high level of engagement is an improvement in the welfare, i.e., engagement influences the growth of employees' life satisfaction, more frequent feeling of positive emotions, and heightening self-esteem and sense of meaning. Furthermore, engaged employees enjoy better physical and mental health, e.g., they have a reduced risk of cardiovascular disease, rarely suffer from headaches or problems with the gastric system, and half as often suffer from depression (Figurska, 2015). According to Bakker (2011), engaged employees are physically, cognitively, and emotionally connected with their work roles. They feel full of energy, are dedicated to reach their work-related goals, and are often fully immersed in their work. Hughes and Rog (2008) assert that those organizations that are implementing main practices of knowledge management can appreciate a positive impact on the level of their employees' engagement.

Based on literature review, we formulated a multidimensional model of components of knowledge management (Figure 1).

Based on theoretical bases and formulated multidimensional model of approaches of knowledge management, we formulated the following hypothesis:

Figure 1. Research Model

KNOWLEDGE MANAGEMENT COMPONENTS: *i*th component; *i*=1,2,…, 9:
1. Appropriate employee selection
2. Appropriate employee work competencies
3. Role of mentor
4. Motivation
5. Employee leadership
6. Suitable communication
7. Appropriate organizational climate
8. Friendly working environment
9. Investment in human capital

Work engagement of employees

H1: A significant impact of *i*th knowledge management component on work engagement of employees can be identified: *i* = 1, 2,…, 9.

Methodology

Data and Sample

A survey among Slovenian medium – and large-sized companies was conducted to examine the impact of components of talent management on the work engagement of employees, with the sample size of 112 companies (in each company a senior manager filled the questionnaire). In the structure of employers who participated in the survey, 30.4% were females and 69.6% were males. Regarding the achieved education level of employers who participated in the research, 50.6% of respondents finished a high professional or university education, 31.3% of the respondents have a master's degree or doctorate, 14.5% of the respondents finished college, and the smallest percentage presents respondents who finished vocational training or high school (3.6%). In the survey, large companies participated with 51.9%, and medium-sized companies comprised 48.1%. The structure of employees who participated in the survey show that 43.8% were females and 56.2% were males. The sample comprised 40.2% of employees aged from 18 to 49 years and 59.8% employees aged over 50 years.

Research Instrument

The questionnaire includes 10 items (with 100 statements) of a closed type related to constructs of approaches of talent management in the research model, represented by Figure 1, and two items (13 statements) related to the demographic characteristics of the respondents. The five-level Likert-type scale was applied, where respondents assessed their agreement/disagreement (1 = completely disagree; 2 = do not agree; 3 = partially agree; = agree; 5 = completely agree).

Implementation of components of knowledge management were measured with various constructs, as presented in Figure 1: Appropriate employee selection, appropriate employee work competencies, the role of mentor, employee leadership, suitable communication, appropriate organizational climate, motivation, friendly working environment, and investment in human capital. Statements (nine statements in our questionnaire) for the construct appropriate employee selection and appropriate employee work competencies (22 statements in our questionnaire) were formed by International Institute of Directors and Managers (2018) and author Maloney (2018). Statements for the construct the role of mentor (six statements in our questionnaire) were formed by authors Klasen in Clutterbuck (2003). Statements for the construct employee leadership (11 statements in our questionnaire) were formed by authors Cheung and Wong (2011), Jaiswal and Dhar (2017). Statements for the construct the suitable communication (11 statements in our questionnaire) were formed by Clutterbuck (2002); statements for the construct organizational climate (eight statements in our questionnaire) were formed by Schaufeli (2016) and Albrecht et al. (2018); statements for the construct motivation (nine statements in our questionnaire) were formed by Amar (2004), Islam and Ismail (2008); statements for the construct friendly working environment (10 statements in our questionnaire) were formed by Kalliath and Kalliath (2012), George and Zakkariya (2015), Bolin et al. (2008); statements for the construct investing in human capital (six statements in our questionnaire) were formed by

Coulson-Thomas (2012), Felício et al. (2014), Vidotto et al. (2017). Statements for the construct work engagement of knowledge employees (16 statements in our questionnaire) were formed by Schaufeli and Bakker (2004) – Utrecht work engagement scale.

Statistical Analysis

Within the empirical part. In the first step, we use factor analysis to reduce a large set of measured variables into a smaller set of factors. We wanted to establish if the use of factor analysis is justified on the basis of the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO ≥ 0.5) (Kaiser, 1974) and Bartlett's test of sphericity. For communalities, the 0.4 threshold was used (Costello & Osborne, 2005). We also checked the reliability of measurement scales within the scope of inner consistency with Cronbach's alpha coefficient (Cronbach, 1951, 297–334). We also employed the factor rotation, whose purpose is to improve factors interpretability and achieve a more even distribution of variance according to factors. We used the rectangular rotation with the characteristic that the rotated factors are independent from each other. The rectangular rotation varimax maximises the variance of weight squares in every factor and, with that, simplifies the structure by columns (Manly, 2005). We saved the derived factor scores and, with that, created new variables (factors).

Based on the gained new variables (factors), we performed regression analyses to test the impact of ith multidimensional construct (knowledge management component) on employees' engagement. Within the regression analyses, the correlation coefficient, coefficient of determination, F-test, and t-test were used.

Results

In the first part, the results of factor analysis for each component of knowledge management are presented.

Appropriate Employee Selection

Table 2 presents the results of factor analysis for the construct appropriate employee selection. Value of Kaiser-Meyer-Olkin measure of sampling adequacy (KMO = 0.780) and results of Bartlett's test of sphericity ($p < 0.001$) suggested the use of factor analysis.

The values of all communalities for construct appropriate employee selection are higher than 0.60; therefore, we have not eliminated any variable. We obtained a two-factor solution; both factors together explain 83.82% of variability, namely, first factor 60.31%, second factor 23.51% (Table 2).

We named the two factors for construct appropriate employee selection according to the variables that were included into each factor and thus represented it, namely,
- Factor 1: The candidate's past experiences, achievements, and knowledge;
- Factor 2: Employee selection.

Factor weights indicate the importance of each individual variable in a factor, i.e., the higher the weight, the more important the variable for the factor is. In our case, the most important role in the candidate's past experiences, achievements, and knowledge (factor 1) is the past candidate training and education. In employee selection (factor 2), the

Table 2. Results of Factor Analysis for the Construct Appropriate Employee Selection

Statement	Communalities	Factor Loadings	
		1	2
We employ exclusively persons with high potential	0.887	0.882	0.331
We employ exclusively persons with high work efficiency	0.860	0.904	0.208
We employ persons who are capable of quality work	0.609	0.764	-0.157
We employ persons with work experience	0.765	-0.051	0.873
Candidate's achievements are important	0.925	0.241	0.931
Candidate's competencies are important	0.779	0.883	0.018
Candidate's past training and education play an important role	0.924	0.204	0.939
Candidate's ability to think creatively is important	0.945	0.779	0.582
Candidate's ability to connect/network with others is important	0.851	0.799	0.462
Kaiser-Meyer-Olkin measure: 0.780			
Cumulative percentage of explained variance for first factor: 60.315 % Cumulative percentage of explained variance for second factor: 23.507 %			

most important variable is "We employ people exclusively with high work efficiency."

The value of Cronbach's alpha for appropriate employee selection is exemplary in the case of both factors together (0.913) and with factor 1 (0.931) and with factor 2 (0.925).

Appropriate Employee Work Competencies

Table 3 presents the results of factor analysis for the construct appropriate employee work competencies. Value of Kaiser-Meyer-Olkin measure of sampling adequacy (KMO = 0.605), and results of Bartlett's test of sphericity ($p < 0.001$) suggested the use of factor analysis.

Again, the values of all communalities for construct appropriate employee work competencies are higher than 0.50. We obtained a two-factor solution; both factors together explain the 81.31% of variability, namely, first factor 63.07%, second factor 18.24% (Table 3).

Because no particular distribution of variables across the two factors was present, we use the general names for factors:
- Factor 1: appropriate employee work competencies 1;
- Factor 2: appropriate employee work competencies 2.

In our case, the most important role in the appropriate employee work competencies 1 (factor 1) has the variable "Employees must have a positive attitude towards change." In appropriate employee work competencies 2 (factor 2), the

Table 3. Results of Factor Analysis for the Construct Appropriate Employee Work Competencies

Statement	Communalities	Factor loadings	
		1	2
An employee must have a positive attitude to changes	0.893	0.041	0.944
An employee must have managerial skills	0.716	0.802	-0.270
An employee must be able to assume responsibilities and risks	0.679	0.605	0.559
An employee must be able to solve various problems	0.838	0.593	0.697
An employee must be able to make decisions	0.863	0.893	0.256
An employee must be able to use a systematic and analytical approach in the company	0.871	0.648	0.672
An employee must be able to make good decisions even under pressure	0.899	0.905	0.285
An employee must be able to judge the consequences of his decisions	0.868	-0.007	0.932
An employee must be able to use good experiences from the past	0.780	0.883	-0.017
An employee must be able to see a problem comprehensively	0.882	0.778	0.526
Employee innovation and creativity are important	0.885	0.860	0.381
An employee must encourage and use an honest way of communication	0.790	0.532	0.712
An employee must provide accurate and consistent information and instructions	0.587	0.085	0.761
An employee must encourage and motivate other colleagues	0.778	0.870	-0.145
An employee must delegate wisely and effectively	0.900	0.816	0.484
An employee must maintain a good, fun working environment with appropriate work challenges	0.753	0.832	0.247
An employee must be able to develop cooperation at all levels of the company	0.874	0.762	0.541
An employee must be able to solve conflicts in the company	0.910	0.587	0.752
An employee must be able to provide feedback and constructive criticism	0.770	0.859	0.181
An employee must be able to establish informal relationships to achieve goals	0.719	0.781	0.331
An employee must be a good negotiator	0.749	0.850	0.165
An employee must be flexible	0.886	-0.020	0.941

Kaiser-Meyer-Olkin measure: 0.605

Cumulative percentage of explained variance for first factor: 63.071%
Cumulative percentage of explained variance for second factor: 18.240%

most important variable is "An employee must be able to make good decisions even under pressure."

The value of Cronbach's alpha for appropriate employee work competencies is exemplary in the case of both factors together (0.968) and with factor 1 (0.971) and with factor 2 (0.947).

The Role of Mentor

Table 4 presents the results of factor analysis for the construct the role of mentor. Value of Kaiser-Meyer-Olkin measure of sampling adequacy (KMO = 0.708) and the results of Bartlett's test of sphericity ($p < 0.001$) again suggest the use of factor analysis.

The values of all communalities for the construct role of mentor are higher than 0.60. Total variance explained is 79.86%. All factor loadings for construct the role of mentor are higher than 0.80. In our case, the most important role of mentor is "The mentor helps to set up an employee development plan for the company" (Table 4). The value of Cronbach's alpha of the factor the role of mentor is 0.949; therefore, the reliability of the measurement of the role of mentor is exemplary.

Employee Leadership

Table 5 presents the results of factor analysis for the construct employee leadership. Value of Kaiser-Meyer-Olkin

Table 4. Results of Factor Analysis for the Construct Role of Mentor

Statement	Communalities	Factor Loadings
A mentor assists in evaluation of new candidates for employment	0.646	0.804
A mentor decides on employment of a new candidate	0.775	0.880
A mentor introduces a candidate to a new workplace	0.712	0.844
A mentor participates in the promotion of the employee	0.909	0.953
A mentor helps to set up an employee development plan in the company	0.913	0.956
A mentor orders the tasks that the employees perform in the framework of their work tasks	0.837	0.915
Kaiser-Meyer-Olkin measure: 0.708		
Cumulative percentage of explained variance: 79.857%		

Table 5. Results of Factor Analysis for the Construct Employee Leadership

Statement	Communalities	Factor Loadings	
		1	2
In the company, we are concerned with good relationships	0.915	0.535	0.793
In the company, we are concerned with the prevalence of respect and trust	0.842	0.069	0.915
In the company, we monitor the performance of employees	0.633	0.573	0.552
We pay attention to employees at the individual level	0.797	0.799	0.399
In the company, we ensure that every employee is adequately qualified or educated	0.852	0.744	0.546
In the company, we care for employee satisfaction	0.858	0.574	0.727
In the company, we care for adequate motivation of employees	0.898	0.794	0.517
In the company, we care for the well-being and health of employees	0.726	0.316	0.792
In the company, we are concerned with keeping employees with the highest potential	0.873	0.934	0.028
In the company, we are committed to continual improvements	0.926	0.550	0.790
We seek an opportunity to improve the way of working and cooperation between employees	0.925	0.803	0.528
Kaiser-Meyer-Olkin measure: 0.740			
Cumulative percentage of explained variance for first factor: 73.775% Cumulative percentage of explained variance for second factor: 10.270%			

measure of sampling adequacy (KMO = 0.740) and results of Bartlett's test of sphericity (p < 0.001) suggested the use of factor analysis.

The values of all communalities for construct employee leadership are higher than 0.60; therefore, we have not eliminated any variable. The two factors obtained explain 84.04% of variability, namely, first factor 73.77%, second factor 10.27% (Table 5).

Similar to the previous construct, no particular distribution of variables across the two factors was present; therefore, we used the general names for factors:

- Factor 1: Employee leadership 1;
- Factor 2: Employee leadership 2.

In our case, the most important role in the employee leadership 1 (factor 1) has variable "The company takes care of keeping employees with the highest potential." In employee leadership 2 (factor 2), the most important variable is "In the company, we are concerned with the prevalence of respect and trust."

The value of Cronbach's alpha for employee leadership is exemplary in the case of both factors together (0.947) and with factor 1 (0.935) and with factor 2 (0.942).

Suitable Communication

Table 6 presents the results of factor analysis for the construct suitable communication. The value of Kaiser-Meyer-Olkin measure of sampling adequacy (KMO = 0.611) and results of Bartlett's test of sphericity (p < 0.001) suggested the use of factor analysis.

The values of all communalities for construct suitable communication are higher than 0.60. In this case the three factors solution was formed: three factors together explain 88.50% of variability, namely, first factor 64.83%, second factor 12.17%, third factor 11.50% (Table 6).

We named all three factors for construct suitable communication according to the variables that were included in each factor and represent it, namely:
- Factor 1: Communication with employees in the company;
- Factor 2: Possibilities of communication in the company;
- Factor 3: Information about work implementation.

In our case, the most important role in the communication with employees in the company (factor 1) has the variable "We organise periodic meetings." In possibilities of communication in the company (factor 2), the most important variable is "In the company, we emphasise internal communication." In information about work implementation

Table 6. Results of Factor Analysis for the Construct Suitable Communication

Statement	Communalities	Factor Loadings		
		1	2	3
In the company, we emphasise internal communication	0.973	0.197	0.959	0.125
We offer a possibility of contacting by e-mail and by phone	0.662	0.316	0.644	0.383
We organise periodic meetings	0.877	0.895	0.134	0.241
Employees have precise information about the company's goals	0.946	0.209	0.792	0.525
Employees have precise information about the roles in the company	0.983	0.264	0.260	0.920
Employees have detailed information necessary for understanding the work task	0.972	0.244	0.235	0.925
Employees receive reports on their work, achieved results and problems at work	0.850	0.749	0.038	0.536
Exchange of information and opinions prevails in the company	0.751	0.765	0.318	0.255
We regularly organise meetings where employees exchange their ideas, solutions	0.917	0.851	0.416	0.142
We regularly resolve possible conflicts that have arisen	0.904	0.587	0.743	0.082
We try to obtain feedback on employee satisfaction	0.899	0.826	0.430	0.177
Kaiser-Meyer-Olkin measure: 0.611				

Cumulative percentage of explained variance for first factor: 64.829%
Cumulative percentage of explained variance for second factor: 12.169%
Cumulative percentage of explained variance for third factor: 11.498%

(factor 3), the most important variable is "Employees have detailed information necessary for understanding the work task."

The value of Cronbach's alpha for suitable communication is exemplary in the case of all factors together (0.936) and with factor 1 (0.937), factor 2 (0.877), and with factor 3 (0.993).

Appropriate Organizational Climate

Table 7 presents the results of factor analysis for the construct appropriate organizational climate. Value of Kaiser-Meyer-Olkin measure of sampling adequacy (KMO = 0.692), and results of Bartlett's test of sphericity ($p < 0.001$) suggested the use of factor analysis.

The values of all communalities for construct appropriate organizational climate are higher than 0.60. Two factors obtained explain 86.83% of variability, namely, first factor 70.72%, second factor 16.11% (Table 7).

Again, no particular distribution of variables across the two factors was present; therefore, we used the general names for factors:
- Factor 1: Organizational climate in the company 1;
- Factor 2: Organizational climate in the company 2.

In our case, the most important role in the organizational climate in company 1 (factor 1) has the variable, "In the company, autonomy is important." In the organizational climate in company 2 (factor 2), the most important variable is "In the company, the employee satisfaction is important."

Table 7. Results of Factor Analysis for the Construct Appropriate Organizational Climate

Statement	Communalities	Factor Loadings	
		1	2
In the company, interactions with people are important	0.929	0.886	0.379
In the company, the employee satisfaction is important	0.959	0.118	0.972
In the company, loyalty is important	0.965	0.911	0.367
In the company, the employee well-being is important	0.866	0.805	0.467
In the company, cooperation with employees is important	0.807	0.383	0.812
In the company, solidarity is important	0.600	0.304	0.713
In the company, the awareness of people or employees is important	0.959	0.913	0.355
In the company, autonomy is important	0.861	0.927	0.047
Kaiser-Meyer-Olkin measure: 0.692			
Cumulative percentage of explained variance for first factor: 70.719% Cumulative percentage of explained variance for second factor: 16.111%			

Table 8. Results of Factor Analysis for the Construct Motivation

Statement	Communalities	Factor Loadings
In the company, we emphasise the motivation of employees	0.845	0.919
We strive to ensure that each employee is especially motivated in the performance of his work (individual approach to the employee)	0.884	0.940
We provide our employees appropriate pay for success	0.718	0.847
An employee receives a praise or recognition for achieving successful results	0.794	0.891
We enable our employees to attend education, training	0.897	0.947
Employees have the possibility of career development	0.802	0.896
We provide flexible working hours to our employees	0.727	0.853
We provide autonomy at work to our employees	0.649	0.806
In the company, good relationships prevail	0.609	0.781
Kaiser-Meyer-Olkin measure: 0.604		
Cumulative percentage of explained variance: 76.959%		

The value of Cronbach's alpha for appropriate organizational climate is exemplary in the case of both factors together (0.907) and with factor 1 (0.970) and with factor 2 (0.841).

Motivation

Table 8 presents the results of factor analysis for the construct motivation. Value of Kaiser-Meyer-Olkin measure of sampling adequacy (KMO = 0.604), and the results of Bartlett's test of sphericity ($p < 0.001$) suggest the use of factor analysis.

The values of all communalities for construct motivation are higher than 0.60. Total variance explained is 76.96 %. All factor loadings for construct motivation are higher than 0.70. In our case, the most important role in the motivation

has the variable "We enable our employees to attend education, training." (Table 8). The value of Cronbach's alpha of the factor motivation is 0.957; therefore, the reliability of the measurement of motivation is exemplary.

Friendly Working Environment

Table 9 presents the results of factor analysis for the construct friendly working environment. Value of Kaiser-Meyer-Olkin measure of sampling adequacy (KMO = 0.723) and the results of Bartlett's test of sphericity ($p < 0.001$) suggest the use of factor analysis.

The values of the communalities for the variables in the construct of friendly working environment are higher than 0.40. Total variance explained is 73.96%. All factor loadings for

Table 9. Results of Factor Analysis for the Construct Friendly Working Environment

Statement	Communalities	Factor Loadings
We provide employees the possibility of flexible working hours	0.612	0.782
We provide employees a balance between work and private life	0.606	0.779
We care for creating a pleasant company culture and climate	0.763	0.874
We offer our employees the possibility to participate in teams	0.904	0.951
In the company, we emphasise the intergenerational synergy	0.896	0.947
We organise events for socialising of employees	0.783	0.885
In the company, we care for a friendly working environment	0.758	0.871
We care for the well-being of our employees	0.818	0.904
We offer various programs for well-being and coping with stress	0.414	0.643
We are focused on solving individual problems of employees at the workplace	0.842	0.918
Kaiser-Meyer-Olkin measure: 0.723		
Cumulative percentage of explained variance: 73.965%		

Table 10. Results of Factor Analysis for the Construct Investment in Human Capital

Statement	Communalities	Factor Loadings
We enable our employees to develop innovations and encourage them in innovative thinking	0.856	0.925
We encourage employees to achieve successful business results	0.932	0.966
We encourage employees to solve problems efficiently	0.961	0.980
The training of employees is focused on the development of specific competencies and skills, in line with the needs of the company	0.953	0.976
We enable our employees to regularly attend education, training	0.913	0.956
We offer employees the opportunity to further develop their careers	0.755	0.869
We promote a healthy lifestyle for our employees	0.697	0.835
Kaiser-Meyer-Olkin measure: 0.810		
Cumulative percentage of explained variance: 86.691%		

construct friendly working environment are higher than 0.60. In our case, the most important role in the friendly working environment has the variable "We offer our employees the possibility to participate in teams." (Table 9). The value of Cronbach's alpha of the factor friendly working environment is 0.948; therefore, the reliability of the measurement of friendly working environment is exemplary.

Investment in Human Capital

Table 10 presents the results of factor analysis for the construct investment in human capital. Value of Kaiser-Meyer-Olkin measure of sampling adequacy (KMO = 0.810) and the results of Bartlett's test of sphericity ($p < 0.001$) suggest the use of factor analysis.

The values of the communalities for the variables in the construct of investment in human capital are higher than 0.60. Total variance explained is 86.69%. All factor loadings for construct investment in human capital are higher than 0.80. In our case, the most important role in the investment in human capital has variable "We encourage employees to solve problems efficiently." (Table 10). The value of Cronbach's alpha of the factor investment in human capital is 0.971, therefore the reliability of the measurement of investment in human capital is exemplary.

Work Engagement of Employees

Table 11 presents the results of factor analysis for the construct work engagement of employees. Value of Kaiser-Meyer-Olkin measure of sampling adequacy (KMO = 0.810) and the results of Bartlett's test of sphericity ($p < 0.001$) suggest the use of factor analysis.

The values of the communalities for the variables in the construct of work engagement of knowledge employees are higher than 0.70. Total variance explained is 89.70%. All factor loadings for construct work engagement of knowledge employees are higher than 0.80. In our case, the most important role in the work engagement of knowledge employees has the variable "I am enthusiastic about my job." (Table 11). The value of Cronbach's alpha of the factor work engagement of employees is 0.992; therefore, the reliability of the measurement of work engagement of knowledge employees is exemplary.

In the second part of analysis, regression models were tested, with the purpose to test the impact of the ith component of knowledge management on the work engagement of knowledge employees, $i = 1,2,...,9$.

After saving factors' scores as new variables, we performed a regression analysis to test the hypotheses; for the ith

Table 11. Results of Factor Analysis for the Construct Work Engagement of Employees

Statement	Communalities	Factor loadings
At my work, I feel bursting with energy	0.882	0.939
I find the work that I do full of meaning and purpose	0.864	0.930
Time flies when I'm working	0.873	0.934
At my job, I feel strong and vigorous	0.933	0.966
I am enthusiastic about my job	0.987	0.993
When I am working, I forget everything else around me	0.964	0.982
My job inspires me	0.977	0.989
When I get up in the morning, I feel like going to work	0.896	0.947
I feel happy when I am working intensely	0.846	0.920
I am proud on the work that I do	0.812	0.901
I am immersed in my work	0.891	0.944
I can continue working for very long periods at a time	0.873	0.934
I get carried away when I'm working	0.954	0.977
At my job, I am very resilient, mentally	0.889	0.943
It is difficult to detach myself from my job	0.768	0.876
At my work I always persevere, even when things do not go well	0.943	0.971
Kaiser-Meyer-Olkin measure: 0.810		
Cumulative percentage of explained variance: 89.702%		

component of knowledge management, the separate regression model was formed. In the continuation, we present the results of testing the set of Hypotheses H1: A significant impact of ith knowledge management component on work engagement of knowledge employees can be identified; $i = 1, 2,..., 9$.

Table 12 shows regression analysis results.

Model 1

The value of the multiple correlation coefficient between dependent variable (work engagement of employees) and independent variables (Factor 1: The candidate's past experiences, achievements, and knowledge and Factor 2: Employee selection) is $R = 0.847$, which indicates a strong connection between the variables. The value of the adjusted determination coefficient is 0.715. The adjusted determination coefficient explains that 71.5% of the variance of the dependent variable (work engagement of knowledge employees) is explained with the variance of the independent variables (Factor 1: The candidate's past experiences, achievements, and knowledge and Factor 2: Employee selection). We have established the reliability of the derived regression function with the F-test: $F = 315.448$, $p < 0.001$. The results of the regression (Table 12) indicated that the regression coefficient of appropriate employee selection – factor 1: The candidate's past experiences, achievements, and knowledge was 0.792 ($\beta = 0.792$) and was significantly different from 0 ($p < 0.001$). The regression coefficient of appropriate employee selection – Factor 2: Employee selection was 0.300 ($\beta = 0.300$) and was significantly different from 0 ($p < 0.001$).

Model 2

The value of the multiple correlation coefficient between dependent variable (work engagement of employees) and independent variables (Factor 1: Appropriate employee work competencies 1 and Factor 2: Appropriate employee work competencies 2) is $R = 0.862$, which indicates a strong connection between the variables. The value of the adjusted determination coefficient is 0.741. The adjusted determination coefficient explains that 74.1% of the variance of the dependent variable (work engagement of knowledge employees) is explained with the variance of the independent variables (Factor 1: Appropriate employee work competencies 1 and Factor 2: Appropriate employee work competencies 2). We have established the reliability of the derived regression function with the F-test: $F = 360.130$, $p < 0.001$. The results of the regression (Table 12) indicated that the regression coefficient of appropriate employee work competencies – Factor 1: Appropriate employee work competencies 1 was

0.729 ($\beta = 0.729$) and was significantly different from 0 ($p < 0.001$). The regression coefficient of appropriate employee work competencies – Factor 2: Appropriate employee work competencies 2 was 0.459 ($\beta = 0.459$) and was significantly different from 0 ($p < 0.001$).

Model 3

The value of correlation coefficient between the dependent variable (work engagement of employees) and independent variable (the role of mentor) is $R = 0.668$, which indicates there is a moderate connection between the variables. The value of determination coefficient is 0.447. The determination coefficient explains that 44.7% of the variance of the dependent variable (work engagement of knowledge employees) is explained with the variance of the independent variable (the role of mentor). We have established the reliability of the derived regression function with the F-test: $F = 201.725$, $p < 0.001$. The results of the regression (Table 12) indicate that the regression coefficient of the role of mentor is 0.668 ($\beta = 0.668$) and is significantly different from 0 ($p < 0.001$).

Model 4

The value of the multiple correlation coefficient between dependent variable (work engagement of employees) and independent variables (Factor 1: Employee leadership 1 and Factor 2: Employee leadership 2) is $R = 0.858$, which indicates a strong connection between the variables. The value of the adjusted determination coefficient is 0.733. The adjusted determination coefficient explains that 73.3% of the variance of the dependent variable (work engagement of knowledge employees) is explained with the variance of the independent variables (Factor 1: Employee leadership 1 and Factor 2: Employee leadership 2). We have established the reliability of the derived regression function with the F-test: $F = 345.970$, $p < 0.001$. The results of the regression (Table 12) indicate that the regression coefficient of employee leadership – Factor 1: Employee leadership 1 is 0.717 ($\beta = 0.717$) and was significantly different from 0 ($p < 0.001$). The regression coefficient of Employee leadership – Factor 2: Employee leadership 2 is 0.471 ($\beta = 0.471$) and is significantly different from 0 ($p < 0.001$).

Model 5

The value of the multiple correlation coefficient between dependent variable (work engagement of employees) and independent variables (Factor 1: Communication with employees in the company, Factor 2: Possibilities of communication in the company and Factor 3: Information about

Table 12. Regression Analysis Results

Dependent variable	Independent variable	Unstandardized Coefficients		Standardized Coefficients		
		B	Std. error	Beta	t	Sig.
Work engagement of employees	Appropriate employee selection – Factor 1: The candidate' past experiences, achievements, and knowledge.	0.792	0.034	0.792	23.493	0.000
	Appropriate employee selection – Factor 2: Employee selection	0.300	0.034	0.300	8.888	0.000
	Model 1: R = 0.847; Adjusted R-square = 0.715; F-test: F = 315.448, $p<0.001$					
	Appropriate employee work competencies – Factor 1: Appropriate employee work competencies 1	0.729	0.032	0.729	22.708	0.000
	Appropriate employee work competencies – Factor 2: Appropriate employee work competencies 2	0.459	0.032	0.459	14.305	0.000
	Model 2: R = 0.862; Adjusted R-square = 0.741; F-test: F = 360.130, $p<0.001$					
	Role of mentor	0.668	0.047	0.668	14.203	0.000
	Model 3: r = 0.668; R-square = 0.447; F-test: F = 201.725, $p<0.001$					
	Employee leadership – Factor 1: Employee leadership 1	0.717	0.033	0.717	21.980	0.000
	Employee leadership – Factor 2: Employee leadership 2	0.471	0.033	0.471	14.451	0.000
	Model 4: R = 0.858; Adjusted R-square = 0.733; F-test: F = 345.970, $p<0.001$					
	Suitable communication – Factor 1: Communication with employees in the company	0.703	0.037	0.703	19.054	0.000
	Suitable communication – Factor 2: Possibilities of communication in the company	0.402	0.037	0.402	10.898	0.000
	Suitable communication – Factor 3: Information about work implementation	0.089	0.037	0.089	2.419	0.000
	Model 5: R = 0.814; Adjusted R-square = 0.659; F-test: F = 162.557, $p<0.001$					
	Appropriate organizational climate – Factor 1: Organizational climate in the company 1	0.776	0.037	0.776	21.076	0.000
	Appropriate organizational climate – Factor 2: Organizational climate in the company 2	0.244	0.037	0.244	6.637	0.000
	Model 6: R = 0.814; Adjusted R-square = 0.660; F-test: F = 244.121, $p<0.001$					
	Motivation	0.849	0.033	0.849	25.367	0.000
	Model 7: r = 0.849; R-square = 0.720; F-test: F = 643.472, $p<0.001$					
	Friendly working environment	0.824	0.036	0.824	22.988	0.000
	Model 8: r = 0.824; R-square = 0.679; F-test: F = 528.438, $p<0.001$					
	Investment in human capital	0.861	0.032	0.861	26.819	0.000
	Model 9: r = 0.861; R-square = 0.742; F-test: F = 719.278, $p<0.001$					

work implementation) is $R = 0.814$, which indicates there is a strong connection between the variables. The value of the adjusted determination coefficient is 0.659. The adjusted determination coefficient explains that 65.9% of the variance of the dependent variable (work engagement of knowledge employees) is explained with the variance of the independent variables (Factor 1: Communication with employees in the company, Factor 2: Possibilities of communication in the company and Factor 3: Information about work implementation). We have established the reliability of the derived regression function with the F-test: $F = 162.557$, $p < 0.001$. The results of the regression (Table 12) indicated that the regression coefficient of suitable communication – Factor 1: Communication with employees in the company was 0.703 ($\beta = 0.703$) and was significantly different from 0 ($p < 0.001$). The regression coefficient of suitable communication – Factor 2: Possibilities of communication in the company was 0.402 ($\beta = 0.402$) and was significantly different from 0 ($p < 0.001$). The regression coefficient of Suitable communication – Factor 3: Information about work implementation was 0.089 ($\beta = 0.089$) and was significantly different from 0 ($p < 0.001$).

Model 6

The value of the multiple correlation coefficient between the dependent variable (work engagement of employees) and independent variables (Factor 1: organizational climate in the company 1 and Factor 2: organizational climate in the company 2) is $R = 0.814$, which indicates a strong connection between the variables. The value of the adjusted determination coefficient is 0.660. The adjusted determination coefficient explains that 66% of the variance of the dependent variable (work engagement of knowledge employees) is explained with the variance of the independent variables (Factor 1: organizational climate in the company 1 and Factor 2: organizational climate in the company 2). We have established the reliability of the derived regression function with the F-test: $F = 244.121$, $p < 0.001$. The results of the regression (Table 12) indicate that the regression coefficient of Factor 1: organizational climate in the company 1 is 0.776 ($\beta = 0.776$) and is significantly different from 0 ($p < 0.001$). The regression coefficient of Factor 2: organizational climate in company 2 was 0.244 ($\beta = 0.244$) and was significantly different from 0 ($p < 0.001$).

Model 7

The value of correlation coefficient between dependent variable (work engagement of employees) and independent

variable (motivation) is $r = 0.849$, which indicates a strong connection between the variables. The value of determination coefficient is 0.720. Determination coefficient explains that 72% of the variance of the dependent variable (work engagement of knowledge employees) is explained with the variance of the independent variable (motivation). We have established the reliability of the derived regression function with the F-test: $F = 643.472$, $p < 0.001$. The results of the regression (Table 12) indicate that the regression coefficient of motivation is 0.849 ($\beta = 0.849$) and is significantly different from 0 ($p < 0.001$).

Model 8

The value of correlation coefficient between dependent variable (work engagement of employees) and independent variable (friendly working environment) is $r = 0.824$, which indicates a strong connection between the variables. The value of determination coefficient is 0.679. The determination coefficient explains that 67.9% of the variance of the dependent variable (work engagement of knowledge employees) is explained with the variance of the independent variable (friendly working environment). We have established the reliability of the derived regression function with the F-test: $F = 528.438$, $p < 0.001$. The results of the regression (Table 12) indicate that the regression coefficient of friendly working environment is 0.824 ($\beta = 0.824$) and is significantly different from 0 ($p < 0.001$).

Model 9

The value of correlation coefficient between dependent variable (work engagement of employees) and independent variable (investment in human capital) is $r = 0.861$, which indicates a strong connection between the variables. The value of determination coefficient is 0.742. Determination coefficient explains that 74.2% of the variance of the dependent variable (work engagement of knowledge employees) is explained with the variance of the independent variable (investment in human capital). We have established the reliability of the derived regression function with the F-test: $F = 719.278$, $p < 0.001$. The results of the regression (Table 12) indicate that the regression coefficient of investment in human capital is 0.861 ($\beta = 0.861$) and is significantly different from 0 ($p < 0.001$).

Based on results we confirm the set of hypotheses H1: A significant impact of ith knowledge management component on work engagement of knowledge employees can be identified; $i = 1, 2,..., 9$.

Conclusion

Companies that want to survive in unpredictable and complex competitive markets should be able to quickly adapt to the new dynamics of business. This means that they must constantly invest in appropriate approaches of knowledge management and in work engagement of their employees. Knowledge employees are the greatest asset for any enterprise. One of the most important roles in a company is to ensure that employees have the right skills and competences to achieve successful business results. Based on the results, we found that appropriate approaches of knowledge management have a significant positive impact on work engagement of knowledge employees in Slovenian companies.

Moreover, our research reveals that each of the nine dimensions of the knowledge management analysed (namely, appropriate employee selection, appropriate employee work competencies, the role of mentor, motivation, employee leadership, suitable communication, appropriate organizational climate friendly working environment and investment in human capital) has a significant and positive impact on the work engagement of employees. Because the engaged employees, who will take maximum advantage of their potential, are the key factor of the competitiveness and performance of the company, it must be able to employ, identify, and, in particular, develop and retain their knowledge employees. Companies that invest in their employees and provide an appropriate working environment achieve higher productivity, better business results, and competitiveness. Companies need to put into consideration the various elements of knowledge management processes in order to enhance organization learning. It is important therefore for organizations to invest in knowledge creation, knowledge sharing, and retention as well knowledge acquisition and application. Also, companies must invest in employee motivation, in good leadership, suitable communication,

appropriate organizational climate, create a friendly working environment, and also invest in human capital of their employees. Bakker (2017) emphasises that, in a highly competitive business world, where the rate of change has been accelerating, organizations increasingly rely on the strengths and talents of their employees.

Modern organizations that want to stay competitive need engaged employees, i.e., individuals who have high levels of energy, dedication, and absorption. Engaged employees have an abundance of "resources," which they can invest in their work. They are enthusiastic about their work, immersed in their work activities, and persistent when confronted with challenges and hindrances. Moreover, research of the past decade has provided strong evidence for the notion that engagement leads to key organizational outcomes, including creativity and innovation, client satisfaction, positive financial results, and reduced sickness absenteeism.

This research is limited to the field of knowledge management. Theoretical framework and our research present the importance of components of knowledge management on work engagement of employees. The limitation of our research is also that not all important factors shaping engagement of employees were analysed; however, we focused on the components of the knowledge management, as we want to study this particular and important part of the knowledge management.

As an opportunity for future research, we see an upgrade of the measurement instrument with new constructs in the field of components of knowledge management. We suggest that the survey is carried out on the basis of a comparison of managing knowledge employees and their work engagement between different countries. Also, our further research refers to analysing different constructs with structural equation modelling (SEM).

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Komponente managementa znanja in njihov vpliv na delovno zavzetost zaposlenih

Izvleček

V luči globalizacije in sodobnega poslovanja so podjetja izpostavljena izzivom, ki jih povzroča nepredvidljivo in kompleksno konkurenčno okolje. Poslovno okolje s svetovnimi trendi in strogo konkurenco na svetovnem trgu je povzročilo bistvene spremembe, ki jih morajo podjetja uvesti v svoje poslovanje. S tega vidika v podjetju vse bolj postaja pomemben management človeških virov in njegov vložek v znanje zaposlenih. Glavni cilj prispevka je ugotoviti vpliv komponent managementa znanja na delovno zavzetost zaposlenih v slovenskih podjetjih. V empiričnem delu raziskave je sodelovalo 112 slovenskih podjetij. Na vprašalnik, ki je temeljil na podlagi obstoječih merilnih lestvic, so odgovorili managerji in zaposleni. Rezultati raziskave pripomorejo k boljšemu razumevanju pomena managementa znanja v slovenskih podjetjih in njegov pomen v poslovni strategiji, ki mora biti v celoti vključena v vse procese, povezane z zaposlenimi v podjetju.

Ključne besede: management znanja, komponente managementa znanja, zaposleni

The Millennials' Effect: How Can Their Personal Values Shape the Future Business Environment of Industry 4.0?

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Abstract

The main purpose of this paper is to assess a possible impact millennials will have on the future business environment of Industry 4.0, based on their personal value orientations. Millennials are taking over important roles in organizations, but their personal values are significantly different from those of older generations. This paper shows that, based on the Schwartz's value survey with *N*=371 Slovenian respondents, millennials are in general more inclined toward values connected to personal growth and freedom from anxiety, emphasizing self-transcendence and openness to change, than toward self-protection and anxiety avoidance, understating conservation and self-enhancement values. These cognitions can have significant implications in shaping the future business environment of Industry 4.0, as it can become more open, understanding, collaborative, accepting, and generally more supporting, thus creating the evident millennials' effect. Even though millennials are in general well prepared for the future business environment, organizations will have to, in order to retain the millennials, reshape their current organizational environment to better reflect the millennials' views.

Keywords: millennials, Industry 4.0, personal values, predicting business environment, business ethics, digitalization, Schwartz value survey

Introduction

Millennials, the generation often recognized as being born between 1980 and 2005, is increasingly taking over important roles in organizations and making a significant impact on the current business environment (Twenge et al., 2012; Weber, 2017; Akers, 2018). As the largest generation born, millennials are different than previous generations (Twenge, 2010), and nowhere is this more evident than in their attitudes and behaviors (Gibson et al., 2009).

Individuals' attitudes and behaviors are in large part driven by their personal values (Rokeach, 1973; Ajzen 1991; Schwartz, 1992; Schwartz, 1994); thus, in this study, they can present a base for a key insight into understanding the way future business environment will develop. This fact is also widely recognized by scientists, who continuously find that personal values indeed have a predictive and

influential impact on the behaviors and attitudes of the individuals (Ajzen, 1991; Schwartz, 1992; Verplanken, 2004; Roccas & Sagiv, 2010; Weber, 2017).

Personal values act as a cognitive filter of sorts. They reflect individual's abstract personal perceptions of the correct behavior into the real environment (Spranger, 1928; Rokeach, 1973; Schwartz, 1992). However, not all personal values are of equal importance to an individual, which is attributed to individual's different personal motivations, beliefs, goals, etc. (Schwartz, 2012; Schwartz et al., 2012). This creates a gap between the types of personal values different generations hold, which has significant implications in the workplace and in a larger frame, in the business environment (Gibson et al., 2009; Twenge et al., 2012; Weber, 2017).

Older generations of employees and managers such as Gen X (born between 1965–1980) hold different sets of personal values than younger generations (Sessa et al., 2007; Gibson, et al., 2009; Twenge et al., 2012; Weber, 2017). They are usually more inclined toward security, conformity, tradition, benevolence, and universalism than millennials (see Ng et al., 2010; Twenge, 2010; Nedelko 2015; Weber, 2017). This means that the current business environment was fundamentally shaped by the personal values of previous generations, and that millennials will shape it according to their prominent personal values. Thus, in this paper, we put forward the notion that the potential impact of millennials on the future business environment can be predicted on the basis of their personal values. Pairing these cognitions with the current trends in business and economic practice presents an important opportunity for applicable study.

Current trends in economic and business practice are nowadays firmly focused on the changes that digitalization, which is showing itself in the form of the Industry 4.0 phenomenon, will bring (Müller et al., 2018; Bonilla et al., 2018; Piccarozzi et al., 2018). Digitalization has, especially in the last decade, had a severe impact on the economic system (Scholz et al., 2018) and, within it, the organizations (Mohelska & Sokolova, 2018). Organizations can be considered as core entities of an economic system (Perrow, 1991); therefore, their role in the development of the future business environment is paramount.

The pillars and orientations of Industry 4.0, which are aiming to profoundly change the normal business practice through digitalization, automation, and artificial intelligence will also have a severe impact on employees (Črešnar & Nedelko, 2017; Schneider, 2018; Črešnar et al., 2019). The complementarity between the personal values of millennials, who are the future employees, and the organization's requirements in the future business economy will also have to be addressed. But, more importantly, no studies have yet presented the potential

impact millennials might have on the future business environment, looking through the lenses of their personal values.

This paper offers significant contributions to business practice, management, and other social academic disciplines. It offers a theoretical assessment model of the changes that the millennial generation will likely bring to the future business environment, based on their personal values. Moreover, it presents personal value orientations of 371 Slovene millennials based on Schwartz's (2012) value survey. Results provide the starting point, which organizations can use to plan the recruitment processes, succession, training and learning, development, and other employee-related strategic activities.

Theoretical Background

Concept of Personal Values

The deep nature of personal values has, through the decades, been studied by scientists who were fascinated with how those values ultimately affect human behavior (Kluckhohn, 1951; Rokeach, 1973; Schwartz, 1992, Schwartz, 1994; Schwartz, 2012). Looking at personal values from a purely applicable and practical standpoint, such as considered in this paper, the concept can be applied in various scientific fields, e.g., in humanities, social sciences, etc. (Sagiv et al., 2017). Personal values are most often described as a set of abstract goals, beliefs, etc. that influence a person's view of the world (Rokeach, 1973; Schwartz, 1992). But we can describe them, as a cognitive filter, through which a person is judging specific real-world circumstances. The study of personal values has therefore attracted scientists in various fields in trying to describe or predict the specific behavior of certain individuals (see Grojean et al., 2004; Bruno & Lay, 2008; Twenge, 2010; Nedelko, 2015; Weber, 2017, etc.). Specifically, in the context of business economy, scientists have most often gravitated toward linkages between personal values and leadership or management (Grojean et al., 2004; Bruno & Lay, 2008; Nedelko, 2015; Akers, 2018), personal values and organizational ethics or social responsibility (Poto & Lay, 2008; Nedelko, 2015; Nedelko al., 2017), personal values and management innovativeness (Nedelko & Potočan, 2019), the role of personal values in supporting innovativeness (Dabic, Potocan, & Nedelko, 2017), etc.

Through the extensive development of the concept, scientists were starting to notice a pattern of consistent (universal) structure that personal values have (Rokeach, 1973; Schwartz, 1992). In this paper, we base our cognitions on Schwartz's (1992; 1994; 2012) theory, who proposed the following structure of personal values in 1992 but refined

the concept through the years. Schwartz (1992) proposed 10 specific dimensions or types of personal values, which differ according to a person's motivation. These are, namely:

1. **Power:** explaining persons inclinations towards authority and wealth or to dominate and control other people.
2. **Achievement:** focusing on a person's capacities, competencies, and ultimately personal success.
3. **Hedonism:** a pure focus on self-gratification and pleasurable enjoyment of life.
4. **Stimulation:** tendencies toward exciting, varied, and challenging life.
5. **Self-direction:** emphasizing freedom, creativity, and curiosity.
6. **Universalism:** explaining tolerance, understanding, and tendency to protect nature and all living creatures.
7. **Benevolence:** reflecting honesty, helpfulness, and forgiveness toward others.
8. **Tradition:** accepting the culture or religion along with customs and ideas of the society.
9. **Conformity:** explaining obedience, politeness, and resistance to actions that may harm others.
10. **Security:** emphasizing on stability, safety and harmony of the country, relationships, and of the individual.

From these 10 main types of personal values, four higher dimensions became clearly visible, namely, (1) self-enhancement, joining power, hedonism, and achievement; (2) openness to change, explaining stimulation, self-direction, and hedonism; (3) self-transcendence, encompassing benevolence and universalism; and lastly (4) conservation, reflecting security, conformity, and tradition. The first two higher dimensional values reflect personal interest, and the second two reflect social interest of a person (Schwartz, 1992). Still, these dimensions are even more expended to the level of sectors. Self-transcendence and openness to change fall under the sector of personal growth and freedom from anxiety, where conservation and self-enhancement fall under self-protection and anxiety avoidance sector (Schwartz et al., 2012). The theory has since 1992 expanded and became more refined (see Schwartz et al., 2012).

An important theoretical notion, on which we base the applicative results of this paper, states that personal values are able to predict individual's future behavior, the concept is presented in Figure 1 (Ajzen, 1991; Schwartz, 1992; Verplanken, 2004; Roccas & Sagiv, 2010; Weber, 2017).

The strength of this concept is in the idea that personal values create attitudes (Schwartz, 1992; Roccas & Sagiv, 2010; Schwartz, 2012), which in turn influence behavioral intention that results in a certain behavior (Ajzen, 1991). This means that, for purposes of this study, we are using this concept to predict the changes in the future business environment, which will be influenced by the millennials' personal values.

Millennials and Their Personal Values

Millennials are, in general, different than previous generations (Twenge, 2010; Ng et al., 2010; Twenge et al., 2012; Weber, 2017; Akers, 2018). Born between the 1980 and 2000 (or sometimes 2005), it is estimated that millennials are the largest generation ever to be born, counting around 80 million individuals. This generation grew up in the era of rapid advances in digital technology and computation, giving them a unique information-based life experience, which previous generations did not have (Weber, 2017). These profoundly different life experiences have shaped millennials' personal values differently from those of previous generations. As Weber (2017, p. 519) argues, specific personal values have varying degrees of importance for different generations, which is often the result of the aforementioned different life experiences.

In general, the millennials are considered to be more flexible, adaptive, open to change, and hedonistically oriented than Generation X, who are more conservative and value more tradition in the sense of stability, hard work, and security (Lester, 2011; Ahn & Ettner, 2014; Akers, 2018). Furthermore, millennials in management have different values in the sense that they are more self-centered and less other-centered, meaning that they prioritize self-enhancement more than self-transcendence. This also reflects in the fact that they give more importance to the competencies and skills; however, it is peculiar that, at the same time, they also have higher moral values. Millennials also value friendship, love, and ambition more than previous generations (Gibson et al., 2009). Ng et al. (2010) find that millennials are prioritizing parts of the job, which are individualistically oriented, meaning that they want to be promoted fast and develop their competencies to become better at their job. At the same time, however, they value their lives outside of work. Weber (2017) also argues that high moral and ethical values make millennials prepared to enter today's business environment.

Figure 1. Theoretical Model of How Values Influence Behavior

Source: Adapted from Ajzen, 1991; Schwartz, 1992; Schwartz, 1994

With reference to research results from the studies of millennials' personal values from other Western and developed economies (Gibson et al., 2009; Ng et al., 2010; Twenge et al., 2012; Weber, 2017), we can postulate the following hypothesis.

Hypothesis: *Millennials hold self-protection and anxiety avoidance sector values more prominently than values of personal growth and freedom from anxiety. Thus, they are emphasizing self-enhancing and conservation values more than self-transcending and openness to change values.*

However, the business environment is constantly changing, and especially in the global business economy, trending more toward multidisciplinary approaches to problem-solving, teamwork, more democratic leadership, more important roles of employee creativity and productivity, outstanding ethics of employees and organizations, etc. These trends are, in a large part, based on the business practices that are typical for Industry 4.0-based business environment and were shaped by digitalization (Spath et al., 2013; Erol et al., 2016; Prifti, et al., 2017; Črešnar & Nedelko, 2017; Scholz et al., 2018; Enke et al., 2018). Thus, these cognitions call for the reexamination of the personal values of the future employees and the role of personal values in future workplace environment.

Effects of Digitalization on the Business Environment

When pushing the paradigms of current science, both natural and social, there are a lot of discussions about the phenomenon of digitalization. This phenomenon has, in the last decade, caused profound changes in the natural environment, society, and, consequently, in the business economy (Scholz et al., 2018; Bonilla et al., 2018). Its importance for the progress of human species can be rivaled with such events as the development of agriculture or mastering the fire (Takács-Sánta, 2004; Scholz et al., 2018). Put in simple words, digitalization is a process of representing the real world with digital symbols using digital technologies (Scholz et al., 2018). But nowhere are its effects more evident than in the manufacturing and industrial sector, which gave rise to the phenomenon of Industry 4.0, where business digitalization is at its strongest (Bressanelli et al., 2018). Industry 4.0 aims for a new industrial revolution while integrating automation, Internet of Things, cyber-physical systems, artificial intelligence, and smart manufacturing (Wang et al., 2016; Roblek et al., 2016).

So, what are the expected effects of digitalization on the business environment? If we examine the issue through the lenses of which new competencies employees will have to have, we see that an increasingly multicultural environment will require employees to be more inclined toward teamwork, social interactions, collaborations, adaptivity,

flexibility, ethics, etc. (Erol et al., 2016; Herold et al., 2016; Prifti et al., 2017, Enke et al., 2018) prompting a high need for benevolence and universalism values. Moreover, it is expected from employees to be highly creative, innovative, open to learning, emotionally mature, and able to self-manage (Erol et al., 2016; Herold et al., 2016; Prifti et al., 2017), which calls for high self-direction and stimulation values. But contrary to a different note, due to the high multicultural, multidisciplinary, and collaborative environment toward which business is apparently striving, personal values for power, security, achievement, and tradition are not as emphasized. However, they will be mandatory for future leaders (Bowels, 2015; Herold, 2016; Akers, 2018).

In consequence of these changes, the question of which values, attitudes, and behaviors employees have and how this affects the future industry becomes relevant. Therefore, an empirical examination to address this issue is needed.

Methods

Sample and Procedures

The data for this study were obtained with a survey in 2018 conducted among Slovenian young adults, who can be characterized by their age into the millennial generation. Addressing the cognition that this generation is technologically adapted, we conducted a survey online and spread it through the population with the help of social media tools. For the analysis in this study, we use *N*=371 returned questionnaires with no missing data. The sample size is approximately the same as the sample size in other studies of personal values in students (see Schwartz et al., 2012). Also, the sample is large enough for the analyses of mean values, to draw from it meaningful conclusions (Couper, 2000).

In the obtained sample, there are 58% of female respondents and 42% of male respondents. With regard to respondents' place of residence, 41.5% live in a large city and 58.5% live in a suburban town or on a countryside. On average, respondents are 22.62 years old with a standard deviation of 2.85 years. The youngest respondent was 16 years old; the oldest respondent was 35 years old.

Measures

To measure personal values of millennials, a refined theory of personal values with a short value survey was used as a base for conducting a survey (Schwartz et al., 2012). In the survey, there were 26 items or individual values, which

were then joined into constructs of 10 main types (subdimensions) of personal values according to the theory indications of where each item fits a subdimension (Schwartz, 1992; Schwartz, 1994; Schwartz, 2012; Schwartz et al., 2012). To grade personal values, millennials were able to select an answer on a 6-point Likert type scale, from 1 = this is nothing like me to 6 = this is very much like me. In previous studies of students' (approximately the same age as millennials) personal values with Schwartz value survey, 6-point scales were also used in Turkey, Switzerland, Israel, and Germany (see Schwartz et al., 2012).

Results

Statistics in Table 1 show interesting and peculiar rankings of personal values among Slovenian millennials, suggesting that further investigations are necessary. According to the results, at the forefront are personal values connected to personal growth and freedom from anxiety. The highest-ranked personal value of Slovenian millennials is benevolence ($\bar{y}$=5.11; σ=.79). Following are self-direction ($\bar{y}$=5.00; σ=.77), hedonism ($\bar{y}$=4.87; σ=.88), and universalism ($\bar{y}$=4.82; σ=.72). Next, personal values connected more to self-protection and anxiety avoidance come to the forefront. Namely, achievement ($\bar{y}$=4.69; σ=1.02), security ($\bar{y}$=4.46; σ=1.10), stimulation ($\bar{y}$=4.15; σ=1.04), tradition ($\bar{y}$=3.42; σ=1.56), conformity ($\bar{y}$=3.40; σ=1.11), and, lastly, the lowest-ranked personal value is power ($\bar{y}$=3.05; σ=1.06).

Table 1. Results of the Mean Value Analysis and Corresponding Ranks

Personal Value	Mean	Standard Deviation	Variance	Rank
Benevolence	5.11	.79	.62	1.
Self-direction	5.00	.77	.60	2.
Hedonism	4.87	.88	.78	3.
Universalism	4.82	.72	.52	4.
Achievement	4.69	1.02	1.04	5.
Security	4.46	1.10	1.22	6.
Stimulation	4.15	1.04	1.08	7.
Tradition	3.42	1.56	2.44	8.
Conformity	3.40	1.11	1.24	9.
Power	3.05	1.06	1.12	10.

Notes: Sample size is 371; in shaded fields are values connected to personal growth and freedom from anxiety; in unshaded fields are values connected to self-protection and anxiety avoidance.
Source: Author's calculations.

Results in Table 1 also show thought-provoking variability when examined through the lenses of rankings. As rankings of personal values decrease, i.e., lose their subjective importance in the sample, the variability of the results increases.

It is evident that personal values at the top of the rankings have lower standard deviations and variances (no. 1 = benevolence; σ=.79; s^2=.62) than personal values at the bottom of the rankings (no. 10 = power; σ=1.06; s^2= 1.12).

Discussions and Recommendations

What Value Profile of the Millennials Do the Results Indicate?

It is evident that, based on the millennials' personal values rankings, they will be striving more toward personal growth in the workplace. That notion falls in line with Industry 4.0 competence models, which encourage such endeavors (Erol et al., 2016; Prifti et al., 2017; Enke et al., 2018). On the same note, the millennials will also be more inclined toward ridding themselves of anxiety rather than only avoiding anxiety. This suggests a proactive behavior toward self-management, creativity, and openness toward new opportunities and toward other people, which is also needed from future employees (Prifti et al., 2017; Grzybowska & Lupicka, 2017). The lack of their focus on tradition, security, and conformity further strengthens a case of their fit in the future business environment. With regard to self-enhancing values of power and achievement, these are not among top-ranked, even though other studies have found these to be more prominent in millennials (Ng et al., 2010; Twenge, 2010; Nedelko, 2015; Weber 2017; Akers, 2018). Thus, we reject our hypothesis, as clearly Slovene millennials categorically prioritize personal values of personal growth and freedom from anxiety. This peculiar fact may have some implications in former political orientation, where in the socialistic/communistic Yugoslav regime such communal values were heavily encouraged (Rokeach, 1979). Thus, it is possible that some of the "old" principles were transferred from parents to children with means of childhood value indoctrination (Baer Jr., 1977), which is showing up nowadays in the form of our results.

With regard to the higher variability of low-ranked personal values, the results suggest that, in general, the millennials are homogeneous in self-transcending values and in part in openness to change. This indicates that these personal values are well rooted in society. However, with regard to conservation and self-enhancement values, high variability suggest that millennials have different goals or motives when striving for power and achievement or emphasizing conservation. Therefore, although the millennials are, in general, benevolent and open, there are also those among them who strive for power and achievement but, at the same time, remain benevolent and open. Overall, with regard to

business practice, we can conclude that millennials are prepared for the future business environment of Industry 4.0, looking through the lenses of their personal values. Even though a recent survey found that, based on their expectations and disappointments, they might not be prepared for it (Deloitte, 2018).

How Will Millennials Impact the Future Business Environment?

Employers, practitioners, and scientists have voiced their requirements for employees' competencies and demeanor in the future Industry 4.0. But millennials, special as though they are, will undoubtedly shape it to suit their values; therefore, the "millennials' effect" will be evident. For instance, millennials who are supposed to be self-centered in comparison with previous generations (Twenge et al., 2012; Weber, 2017) are not showing these tendencies according to the results of this paper. Focusing more on others may indicate a more open, collaborative, and accepting working environment. High ranking of hedonism also indicates that personal time and enjoyment of life will be an important factor; thus, it can be expected that millennials will require more vacation time and work harder during normal working time.

In contrary with older generation employees (Gibson et al., 2009; Twenge, 2010; Weber, 2017), millennials do not place a lot of emphasis on conservation values of security, tradition, and conformity, which can further suggest a more open and free future business environment. However, it is curious that, in the case of Slovenia, recent and past study results indicate that Slovenian managers also do not put crucial importance on these values, in comparison with other developed economies (Piciga & Musek et al., 1992; Nedelko & Potočan, 2019), which further strengthens the implications the former regime had on personal value development.

Some millennials undoubtedly do place a lot of emphasis on self-enhancing values (Ng et al., 2010; Weber, 2017). This can be a result of their upbringing, as they were, through television and later on through social media, more subjected to various success stories of famous people, which were put forward as highly valued endeavors in the society (Weber, 2017). But it is suggested that millennials with high self-enhancing values may make good leaders in the future Industry 4.0 (Bowels, 2015; Akers, 2018). This, coupled with high self-transcending values, which are according to this study highly ranked and homogeneous, can support the notion of more open, understanding, collaborative, accepting, and generally supporting future business environment.

With regard to millennials' effect on the organizations and their management, several key points can be outlined. A growing projected shortage of workers in Western economies suggests that millennials will have the option to choose between organizations for which they wish to work for (Ng et al., 2010). This means that organizations should be prepared and have strategies in place to ensure low employee turnover rate and have reward systems in place to ensure that millennials will be loyal to organizations that, according to Lancaster and Stillman (2002), are currently not. Setting the proper work environment will be key to retaining millennials; here, the results from personal values profiles can be significant. To reflect their general personal values, the future business environment should be oriented to enable millennials to develop, have more available leisure time, while reflecting universal, progressive, and benevolent attitudes toward others and the environment. These cognitions can thus enable organizations, especially in the manufacturing sector, which is the most tightly connected to Industry 4.0 (Müller et al., 2018) a comprehensive framework to plan the recruitment processes, succession, work design, training and learning, development, etc.

Future Directions and Study Limitations

To further enhance the cognitions, additional studies on millennials' personal values should be conducted with connection to the future business environment of Industry 4.0. Specifically, the comparison between the millennials from different parts of the Western world, and also comparison between different age groups within the millennial generation, can add benefit toward more comprehensively understanding the personal value dynamics and consequently their impact. To obtain a more accurate picture of their impact, the millennials' attitudes toward digitalization-based business environment can further enrich the existing models.

Several limitations of the study can also be outlined. The sample is conveniently taken; thus, generalizations of the results are more difficult to make. Also, the sample is taken from the Slovenian population, which can have some implications in the results due to the Slovenian gradual transitional approach to a free market economy. A self-assessment method was used, which can also influence the results (Lau et al., 2016). Some studies that were cited regarding the personal values of millennials; for instance, Ng et al. (2010), Twenge et al. (2012), and Weber (2017) may have implications in the results, as they were mostly made among the North American population. Last, predictions were made based on the suggested future behavior through the lenses of personal values, which may not comprehensively reflect the real-world circumstances that influence behavior (Ajzen, 1991; Schwartz, 1994).

Conclusion

The main aim of this study was to assess the personal values of millennials and determine how they fit into the future business environment of Industry 4.0 and how will they change it with their attitudes and behaviors. First, with regard to the importance millennials place on specific personal values, results show that millennials are focusing more on personal growth and freedom from anxiety than on self-protection and anxiety avoidance. Personal values connected with these tendencies suggest that they can fit into the future business environment, are compatible with it, and complementary to it. Second, with regard to their impact on the future business environment, arguments can be made that, based on their personal values, the future business environment of Industry 4.0 will be more supportive, collaborative, teamwork oriented, open, and understanding toward others. Third, overall, we can conclude that millennials' special personal value orientations will undoubtedly cause changes in the future business environment. This environment will reflect the more progressive beliefs and attitudes millennials grew up with. Therefore, organizations, especially in the manufacturing sector, should also prepare their environment to better suit millennials' value orientations in order to secure their productivity, happiness, and loyalty to minimize the turnover.

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Učinek milenijcev: kako lahko njihove osebne vrednote oblikujejo prihodnje poslovno okolje v Industriji 4.0?

Izvleček

Temeljni namen tega prispevka je oceniti, kakšen vpliv bodo imeli milenijci na prihodnje poslovno okolje v Industriji 4.0 glede na njihove osebne vrednote. Milenijci prevzemajo vse bolj pomembne vloge v organizacijah, njihove osebne vrednote pa so precej različne od tistih, ki jih imajo starejše generacije. Ta prispevek kaže na to, da so slovenski milenijci na podlagi Schwartzevega testa vrednot, v katerega je bilo zajetih N = 371 anketirancev, bolj nagnjeni k osebnim vrednotam, ki so povezane z osebno rastjo in osvoboditvijo pred tesnobo, saj kategorično poudarjajo vrednote samopreseganja in odprtosti za spremembe. Manj nagnjeni pa so k vrednotam, ki so povezane s samozaščito in izogibanjem pred tesnobo, kar pa se kaže v tem, da velike pomembnosti ne namenjajo vrednotam samopoudarjanja in konservacije. Ta spoznanja imajo lahko pomembne implikacije pri tem, kako se bo razvijalo prihodnje poslovno okolje v Industriji 4.0, saj lahko le-to postane bolj odprto, razumevajoče, sodelujoče, sprejemajoče in splošno bolj podpirajoče, kar pa ustvari t. i. učinek milenijcev. Čeprav so milenijci glede na svoje osebne vrednote dobro pripravljeni na prihodnje poslovno okolje, bodo organizacije, če jih bodo hotele zadržati, primorane spremeniti svoje organizacijsko okolje, da bo le-to bolje odsevalo poglede milenijcev.

Ključne besede: milenijci, Industrija 4.0, osebne vrednote, predvidevanje poslovnega okolja, poslovna etika, digitalizacija, Schwartzev test vrednot

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