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RESEARCH PAPER

How Does Human Capital of Public Sector Affect National Wellbeing?

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Abstract
Achieving development alongside welfare is considered one of the main criteria of the power of countries. By virtue of unique authority, the public sector plays a significant role in increasing wellbeing. Thus, the aim of this research is to test relationships between variables with an emphasis on the role of human capital in promoting national wellbeing. The research methodology is correlation, and the primary sources of gathering data were international databases such as the World Bank, UNDP, UNPAN, etc. The analysis was at country level. Research results indicate that the public sector, with its unique human resource, can enhance the capacity for national competitiveness, improve good governance, and promote wellbeing.

Keywords: National wellbeing, Human capital, National competitiveness capacity, Good governance.

Introduction

Scholars from various fields of study classify countries according to coined titles—e.g., developing and developed countries—based on tangible and intangible differences (D'Acci, 2010). Promoting the existing standards through various capabilities reflected in the concept of wellbeing is one strategy to eradicate these differences. Increasing wellbeing is associated with reducing poverty. The last decade has witnessed reductions in the poverty rate for all regions of the world (Fosu, 2017). However, a number of countries have experienced little poverty reduction or even increased poverty rate (Fosu, 2017). On the other hand, we observe a global progress in the human wellbeing since the end of World War II (Estes & Sirgy, 2018). Countries that are more liberal report greater subjective wellbeing (Okulicz-Kozaryn et al., 2014), because they spend more costs on public services (such as health and education) as a percentage of GDP (Djankov et al., 2018). The process of wellbeing has occurred in four sectors, namely the economics, health, education, and welfare sector. Despite these improvements, wellbeing has not reached the ideal conditions (Estes & Sirgy, 2018). In fact, despite enormous programs since the 1980s, poverty persists in the developing worlds (Lowder et al., 2017).

The concept of wellbeing is significant, and most scholars focus on identifying factors affecting it (Azad Armaki, 2000). Studies confirm that four factors, namely financial, social, human, and natural capital play a significant role in the value creation, wealth generation, and national wellbeing promotion. Among these, human capital is key, since it helps create and

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enhance other types of capital (Clevland, 2009). However, differences in the public administration of countries and the varying quality of public services can lead to differences in the level of wellbeing. Through diverse policymaking choices such as budget allocation, legislation, welfare policy, education, tax policy, housing, transport, etc., governments exert a strong power in policymaking and economic conditions. Governments play a critical role in the promotion and protection of health and wellbeing of their population (Hunt, 2012). Also Dollar et al. (2016) recognized a strong relationship between the quality of governance and poverty (Dollar et al., 2016). Business friendly regulation has association with poverty condition of countries. Creating businesses and new jobs, flourishing entrepreneurship, and providing infrastructures help reduce the poverty (Djankov et al., 2018).

Achieving wellbeing and reducing poverty require the use of capable human capital in the public sector. Suitable people management in public sector has societal, organizational, and personnel outcomes (Knies & Leisink, 2018), because the performance of public sector personnel is critical to the delivery of services. The services offered by public organizations affect a person's life from birthday (hospital care) through childhood and teenage years (schooling), adult life (waste collection, transportation, highways, social housing, parks, and open spaces), old age (elderly care), and eventually to death. To a very large extent, the quality of the welfare state and the health and wellbeing of the nation depends on the performance of public sector employees (Knies et al., 2018).

The significance of the present research lies in its contribution to the identification of multivariate relationships in the field of national wellbeing. The main objective of the study was to test relationships between variables to explore that public sector (and its players such as authorities) to help with improvement of national wellbeing. What follows is a review of the related literature and an introduction to the conceptual model.

Theoretical Framework of the Study

Human Capital in the Public Sector

Simon Kuznets (1935) believes that the "capital equation" is an incomplete equation without including human capital. Chen et al. (1996) contend that human capital refers to factors that improve performance including knowledge, skill, ability, and employee attitudes.

Human capital is discussed at three level, namely individual, organizational, and Macro (national) (Liepe, 2016). At organizational level, studies adopt various perspectives regarding the dimensions of human capital. One study categorizes human capital as being comprised of a hard dimension (e.g., capability, knowledge, skill, and talents) and a soft dimension (e.g., motivation) (Aibaghi Esfahani, 2010). At macro level, human capital value, HC effectiveness, coordination of human resource, and the way to exploit human capabilities at national level are examined (Liepe, 2016). In the present study, human capital is looked through the macro lens. For example, rising women's labor force participation relative to that of the men (such as the assignment of political and official position to women) implies that human capital rate will intensify (Polachek & Bonn, 2004). In addition, non-corrupt public agents as valuable asset government employees in corrupt societies will thus spend more time lining their own pockets than serving the public. Corruption thus leads to lower levels of economic growth and to ineffective government. Corruption and trust have effects on factors such as economic growth, the quality of democratic institutions, life quality, the size, and effectiveness of the public sector, etc. (Fritzen et al., 2014).

In another classification, human capital includes two perspectives, namely the resource-based and process-based views. The resource-based view adopts a content-based, internal

perspective of human resources, focusing on the essence of human capital. The process-based view assumes a process-based, external perspective of human capital, concentrating on the management and utilization of this capital (Amit & Belcourt, 1999). Following Amit and Belcort's (1999) classification and the review of related literature, human capital in the public sector includes two dimensions. The first is the content dimension, which indicates the internal quality of human capital. For example, public sector human resources should be moral, accountable, motivated, and it should demonstrate expert knowledge. The second is the process dimension, which studies the human capital management and organization in the public sector.

National Wellbeing

The concept of wellbeing has always been an area of focus, because of its role in value creation in all economic systems. This concept has ethical and engineering origins (D'Acci, 2010).

Wellbeing has been considered quantitatively and objectively as well as qualitatively and subjectively. American scholars mostly considered its qualitative measures including social costs of economic growth, loss of resources for the future, and growth instability. In contrast, European scholars considered its quantitative indices including national product (Glatzer, 2006). What is important is that scholars' different viewpoints stem from dual orientations in the utility concept. Outcome utility is usually measured through financial measures, including goods and services, while procedural utility is defined as wellbeing achieved from living (Ott, 2010). In another category, two perspectives about wellbeing are proposed, i.e., clinical perspective (the absence of negative conditions) and psychological perspective (the prevalence of positive attributes) (Malik & Kohli, 2013).

The concept of wellbeing originates from "being well"; in other words, individuals and entities perform well internally (needs satisfaction) and externally (competition) (Veenhoven 2008). Internally, individuals perceive wellbeing mentally. Externally, objective conditions of life including wealth and health are improved (Glatzer, 2006). Scholars consider subjective wellbeing as psychological wellbeing and objective wellbeing as material wellbeing (D'Acci, 2010). If the objective and subjective dimensions of the quality of life are satisfied, it can be expected that happiness might be obtained (Cummins et al., 2008). Veenhoven (2007) takes into account wellbeing as a synonym for happiness and quality of life. The happiest nations are those in which people enjoy a higher degree of freedom with no discrimination against woman and more trust in interpersonal relation (Ribero & Marinho, 2017).

National wellbeing can be measured through objective, subjective, and mixed approaches. Of these, the third approach is more comprehensive. The most important objective approaches are the human development index, human wellbeing index, and weighted index of social progress. For subjective approaches, the "overall life satisfaction," the personal wellbeing index, and affect balance scale are deemed important (Glatzer, 2006, p. 177). One scholar (D'Acci, 2010) aimed to provide a wellbeing and progress index made through completing and integrating objective and subjective indices. The index provided a balanced idea of wellbeing that emphasizes both subjective and objective wellbeing (D'Acci, 2010). This approach is adopted for the purposes of this study based on its comprehensiveness.

The "wellbeing and progress index" is comprised of five dimensions with 10 indices. The "wellbeing and progress index" integrates the criteria of "health wellbeing," "economic wellbeing," "happiness," "human progress," and "cultural progress." Health wellbeing is demonstrated through life expectancy at birth, economic wellbeing through GDP per capita, the GINI coefficient, and total unemployment (as a percentage of workforces), and happiness

through subjective wellbeing. The scientific-cultural progress is indicated by the "education index" and the number of researchers engaged in research and development, while human progress is a combination of "freedom," "gender equity," and "intentional homicide."

The freedom index is comprised of political rights, election processes, government functions, association and organizational rights, personal autonomy, and individual rights. Gender equity combines seats in parliaments held by women, the estimated female to male income ratio, and the combined gross ratio for females enrolled in primary, secondary, and tertiary education (in percent) (D'Acci, 2010). The progress and wellbeing index is the mean value of these indices.

Human Capital in Public Sector and National Competitiveness

The differences between public and private sectors, which is manifested through different goals and transactions, structures, and processes, stem from acting in different environmental conditions (Rainey & Chun, 2005). The main difference is that in the private sector, the manager's agenda is set by market and the board of directors, while politicians and the public make the agenda for the public sector managers (Skorkova, 2016). Therefore, public sector managers play different roles: they act under more restricted conditions compared to private managers, they are controlled by political leaders and the executives of other governments, and they simultaneously interact with and account for political leaders, regulators, interest groups, media, and nations. To complete their missions, public managers need support from clients, regulators, political leaders, and people in other positions (Rainey & Chun, 2005). Using all public organizations' capabilities in decision making — for example, ensuring the participation of women and low-level groups — creates a decentralized structure in which both employees and organizations shift from stability (equilibrium) toward dynamism (Fredrickson, 1980). The accountability of public managers shifts attention to the interests of stakeholders and clients (Tahmasbi, 2011). Furthermore, flexible payment systems and results-oriented performance appraisal systems can enhance public sector managers' motivation. Consequently, the interests of managers and owners—government and client—simultaneously increase (Danaee Fard & Alvani, 2011). Preventing corruption leads public sector employees toward constructive activities, minimizing their resentment and frustration, which then increase the efficiency of public organizations (Danaee Fard, 2004). A high quality of public administration, as demonstrated in the efficient organization of public sector employees, is obtained through flexible structures, modification of bureaucracy, delegation, and modification of hierarchy. This ultimately increases efficiency and savings (Fredrickson, 1996). Considering this, this study bases the essence of public sector "human capital" on the proposed pillars, defining it as the "utilization of the public sector by efficiently organized expert, diverse, moral, accountable, and motivated human resources."

Government and its players can stimulate the competitiveness of an economy by supporting research and innovation, by encouraging the development of human capital, and by setting rules (Rindermann et al., 2015). Governmental polices determined by governmental managers can encourage or hinder innovation (through building capacities and creating opportunities). These policies pave the way for important changes in technological product and process (Patanakul & Pinto, 2014). In fact, the attributes of people involved in governance determines the quality of governance and guarantees competitiveness in the global market (Rindermann et al., 2015). In other words, the efficiency of public sector authorities depends on competency, education, ability of public officials, and the HR motivation system (Raudeliuniene & Meidute-Kavaliauskiene, 2014). The important point is that managers play a critical role (in public and private sectors) in changing the management

through sharing information about change (communicator), sponsoring the change implementation (supporter), coaching the personnel in the change process (trainer), and changing the management and removing the change resistance (Ionesco et al., 2014). Because of having authority and credibility, top rank managers such as governmental mangers help with the successful management of change (in processes, structures, systems, roles, etc.) (Ionesco et al., 2014). As such, the following hypothesis is proposed.

> H_1: There is a meaningful relationship between human capital in public sector and the enhancement of national competitiveness.

National Competitiveness Capacity and Good Governance

Capacity is the main element and the inevitable requirement of power. Capacity building refers to the ability and capability to build, utilize, and maintain the capacity to complete tasks, solve problems, and set goals to effectively conduct affairs and improve the status of individuals or communities (Graham & Fortier, 2006). In addition, rapid global economic growth and competition between organizations or countries shifts the focus to competitiveness (Cho, 1998). Competitiveness is defined as the competition between institutions — or countries — to obtain competitive advantage in the market. National competitiveness depends on a country's ability to advance progress or innovation to increase the competitive advantage (Bernat & Poteralski, 2006). Integrating the concepts of capacity and competitiveness, competitive capacity is suggested to be a country's relative ability to create and maintain an environment in which institutions can compete to increase progress (North, 1994).

There are different models of competitiveness. Porter's Diamond Model opened a new arena to scholars. After some criticism, theorists including Dunning (1992), Rugman (1992), Cho and Moon (2007) revised Porter's model (1990).

There are several measures of competitive capacity, including the World Competitiveness Yearbook, Global Competitiveness Report, and International Location Ranking (Berger & Bristow, 2009). The present study uses the World Economic Forum represented in the global competitiveness report to develop dimensions to measure competitiveness. The global competitiveness index comprises three dimensions, namely "basic requirement," "efficiency enhancer," and "innovation factors," which include 12 elements.

There are consequences to promoting national competitive capacity and enhancing its dimensions. These include governments' capabilities and capacities to create welfare, promote productivity, establish a successful presence in different markets, and improve the quality of public services (Silvia, 2006). Governments can create opportunities for technological transformation and sustainable development through policymaking and setting the goals and standards (Patanakul & Pinto, 2014). The government's role-playing through direct support of R&D and tax exemptions for investment in sustainable technologies and other technological contributions can create favorable business environment (Patanakul & Pinto, 2014). In addition, capacity building in infrastructure, commerce, the economy, and government promotes standards and improves citizens' welfare (Bernat & Poteralski, 2006). Investing in infrastructure increases employment and decreases unemployment rates, and thus improves government effectiveness (Keogh, 2010). From another perspective, establishing and coordinating efficient institutions and having an appropriate public sector institutional design can assist in responding to and preventing corruption (Javaid, 2010). Capacity building in the science and technology field enables the fulfillment of countries' development goals, promotes the quality of government services, innovates to solve problems and reduce poverty, and finally, increases countries' national wellbeing (Wong & Brahmakulam, 2002). An

element here is macro-economic stability, that is to say, a government can no longer provide effective services if it is obliged to pay much interest for the past debt. Financial deficits limit government power to react to business circles in the future. A high inflation rate impedes companies' and governments' abilities to perform effectively. Based on this, the next research hypothesis is proposed as follows.

> H_2: There is a meaningful relationship between national competitiveness and the enhancement of good governance

Good Governance and National Wellbeing

The term "good governance" indicates a paradigm shift in the role of governments (Abdellatif, 2003). Besides accepting logical government interference, good governance emphasizes the facilitating role of government and public managers in providing high quality services. Moreover, governments pave the way for enhancing civil institutions and social freedom. In this pattern, the government acts as the facilitator of public activities in providing the base for sustainable development to create stability and develop social justice.

Analyzing good governance includes analyzing governing methods such as corporate governance, local governance, international governance, and national governance. These do not necessarily require formal and official governments. In this study, by good we mean a national perspective. In other words, we take governance as the outcome of government programs and policies, which can be defined as the quality of public and civil services and the degree of its independence from political pressure, the quality of policy formulation and implementation, and the credibility of the government to such policies (Kaufman et al., 2010). As such, good governance promotes standard service levels provided by governments to citizens (Davidson, 2004).

Institutions such as the United Nations and the World Bank have proposed the good governance indices. The criteria in this study are those proposed by the World Bank, based on the acceptability and comprehensiveness of the World Bank studies. Lead by Kaufman, the World Bank defines good governance according to six indices, i.e., voice and accountability rights, political stability and violence, government effectiveness, regulatory burden, rule of law, and control of corruption. Based on these, it evaluates the status of good governance in 212 countries once every two years from 1996–2002, and annually since 2002.

With regard to the democratic role of government, justice orientation, and primary mission, it is a government's responsibility to provide efficient public services. The main driver of achieving wellbeing is the public sector and government, which should be considered with regard to the quality of services provided and the status of different government indices. Governments increase citizens' happiness by ensuring conditions like safety, healthcare, and minimum levels of justice or social equity (Ott, 2010). Through a market-oriented perspective and accountability to citizens, governments improve the effectiveness of their activities, which attains good governance. Furthermore, good governance is a critical factor in wealth creation of nations, because it shapes political and economic institutions, develops and interprets the law, influences the human capital development and demographic policies, negotiates the agreements with other countries and international organizations, etc. (Rindermann, 2015). Good governance is a critical element for advancing sustainable development, and its absence limits and hinders sustainable development. Good governance allows efficient management for sustainable and equitable development, and guarantees civil society participation in decision making (through providing the necessary quality of transparency and active public management) (Kardos, 2012).

Good governance may improve wellbeing through "procedural utility" (utility that is obtained from having the rights for participate in the political decision-making process) (Frey & Stutzer, 2005). This trend leads to democratic decentralization. Democratic Decentralization provides more opportunities and atmosphere for citizen's participation. Democratic Decentralization contributes to people's empowerment by providing them a significant role in decision-making. This situation creates the "climate of free choice" that can lead to subjective wellbeing (happiness) (Malik & Kohli, 2013). In fact, giving citizens more opportunities to participate in design and delivery services offers a noticeable improvement in the quality of governance and the levels of national wellbeing (Helliwell et al., 2018).

Good governance may improve life evaluation either directly and indirectly. The changes in governance quality lead to changes in the quality of the life. Improvement in governance impacts the national wellbeing in many ways (e.g., controlling the corruption leads to increasing the economic growth and protection of social trust) (Helliwell et al., 2018), Citizens' trust can easily be destroyed by the presence of corruption. Unethical practices counteract the positive impact of good governance on citizen's trust (Yousef et al., 2016), while the reduction of political instability and increasing confidence in rules play a significant in economic growth (Beleiu et al., 2015). Thus, the final hypothesis of this research is as follows.

> *H_3:* There is meaningful relationship between good governance and the promotion of national wellbeing level.

Human Capital in the Public Sector and National Wellbeing

Studies have indicated that four factors – namely financial, social, human, and natural capital – play a role in the processes of value creation, wealth generation, and promotion of national wellbeing. Of these, human resources fulfill a key role, since it helps create and enhance other capital through a transformational mechanism (Clevland, 2009). However, effective public service is considered a prerequisite of countries' social and economic development. In other words, the main driver of achieving wellbeing is the government itself. As such, the quality of government-provided services should be considered. By making full sets of policies, the governments play an undeniable role in progress and wellbeing. These include policies that help with the development of technological capacities, policies that put emphasis on the development of business infrastructures, policies that promote the quality of workforce, and policies that create favorable business environment (Patanakul & Pinto, 2014). Government play critical role in the improvement of health conditions (through involvement in surveillance research, planning, access to healthcare, quality insurance, etc.) (Whitsel, 2017). The idea that governments should promote wellbeing dates back to Adam smith and Jeremy Bentham (Okulicz-Kozaryn et al., 2014).

It is therefore concluded that the government is the main factor in enhancing wellbeing through human capital in the public sector as a tool. Due to the environmental changes, the requirements and prerequisites of governmental sector management have changed. These trends – such as innovation, integrity, professionalism, accountability, etc. – have created a need to the development of strategic leadership in governmental sector (Skorkova, 2016). On the other hand, meritocracy in the appointment and promotion of civil servants and paying competitive salaries to attract the best and the most intelligent citizens to join government have been a success factor of governments such as Singapore (Quah, 2013).

The government effectiveness depends positively on the intellectual ability and cognitive competence of leading politicians (Rindermann et al., 2015). Generally, strategies for managing human resources in public sector have a critical role to play in ensuring that public

sector agencies have the capacity to address the need of communities they serve and to the consistently high standards of service (Burke et al., 2013).

Skorkova (2016) has identified three groups of competencies for public sector management, including the interpretive, institutional, and textual ones. Moreover, Skorkova (2016) has proposed a holistic competency model for public sector of Slovak Republic that contains three pillars, namely application skill, social maturity, and professional knowledge. Virtanen (2000) has mentioned five competencies for public managers: task competency, professional competency in administration, professional competency in subject area, ethical competency, and political competency (Virtanen, 2000). Thus, the main hypothesis of this research is proposed as follows.

H: There is a meaningful relationship between human capital in public sector and the promotion of national wellbeing.

The main model of this survey is based on the previously proposed secondary hypotheses.

Research Methodology

This study was descriptive in terms of nature and quantitative in terms of data analysis. A correlation research strategy was adopted, as the study aimed to describe relations between variables. In addition, given that Structural Equation Modeling (SEM) was used for hypothesis testing, the study was a correlation matrix or Covariance matrix correlative study. Data was collected by reviewing the related documents and information. The statistical population of the research was comprised of all countries of the world. To address difficulties in accessing information, non-probable sampling and convenience sampling were used with some criteria to filter sampling. This was done so that community members could be selected as samples, and second, criteria could be filtered to meet the required sample volume. Based on accessibility criteria to information pertaining to the research variables, 135 countries were selected, for which information was collected from 2009 to 2011. The countries are listed in Table 1.

Table 1. The Studied Countries in This Research

The Studied Countries					
Albania	Canada	Guatemala	Lesotho	Norway	Sweden
Algeria	Chad	Guyana	Libya	Oman	Switzerland
Angola	Chile	Haiti	Lithuania	Pakistan	Syrian Arab
Argentina	China	Honduras	Luxembourg	Panama	Tajikistan
Armenia	Colombia	Hong Kong	Macedonia,	Paraguay	Tanzania
Australia	Costa Rica	Hungary	Madagascar	Peru	Thailand
Austria	Croatia	Iceland	Malawi	Philippine	Trinidad a
Azerbaijan	Cyprus	India	Malaysia	Poland	Tunisia
Bahrain	Czech Republic	Indonesia	Mali	Portugal	Turkey
Bangladesh	Denmark	Iran	Malta	Qatar	Uganda
Barbados	Dominican	Ireland	Mauritania	Romania	Ukraine
Belgium	Ecuador	Israel	Mexico	Russian Fe	UAE
Belize	Egypt	Italy	Moldova	Rwanda	United Kingdom
Benin	El Salvador	Jamaica	Mongolia	Saudi Arab	USA
Bolivia	Estonia	Japan	Montenegro	Senegal	Uruguay
Bosnia and	Ethiopia	Jordan	Morocco	Serbia	Uzbekistan
Botswana	Finland	Kazakhstan	Mozambique	Singapore	Venezuela,
Brazil	France	Kenya	Namibia	Slovak Rep	Vietnam
Bulgaria	Gambia	Korea, Rep	Nepal	Slovenia	Yemen
Burkina Faso	Georgia	Kuwait	Netherland	South Africa	Zambia
Burundi	Germany	Kyrgyz	New Zealand	Spain	-
Cambodia	Ghana	Latvia	Nicaragua	Sri Lanka	
Cameroon	Greece	Lebanon	Nigeria	Suriname	

Table 2. List of Variables, Their Dimensions, and Indicators and Databases That Have Been Used

Variable	Dimensions	Indicators	Database	Web Address
National wellbeing	Objective wellbeing	GINI	World Bank (Income Gini Coefficient)	http://iresearch.worldbank.org
		GDP	World Bank	http://worldbank.org
		Expected years of schooling (years)	United Nation Development Program	http://hdr.undp.org
		Number of researchers	UNESCO	http://stats.uis.unesco.org
		Freedom	Freedom House (Freedom of the Press)	www.freedomhouse.org
	Subjective wellbeing	Gender equality	United Nations Development Program (Gender empowerment Measure(GEM))	www.hdr.undp.org
		Life expectancy at birth (years)	United Nations Development Program	http://hdr.undp.org
		Happiness	World Database of Happiness	http://www.eur.nl/fsw/happiness
Good governance	-	Control of corruption	World Bank (Good Governance Indicator)	http://www.govindicators.org
		Role of law		
		Regulatory quality		
		Government effectiveness		
		Political stability		
		Voice and accountability		
National competitiveness capacity	Fundamental requirements	Institution	World Economic Forum (Global Competitiveness Indicator)	www.weforum.org
		Infrastructure		
		Macroeconomic stability		
		Health and primary education		
	Efficiency enhancers	Higher education and training		
		Good market efficiency		
		Labor market efficiency		
		Financial market sophistication		
		Technological readiness		
		Market size		
	Effective factors on innovation	Business sophistication		
		Innovation		
Human capital in public sector	Content dimension	Number of researcher in public sector	UNESCO	http://www.uis.unesco.org
		Education employees in public Sector	United Nation Public Administration Network	www.unpan.org
		Woman in government managerial position	United Nations Development Program	http://hdr.undp.org
		Female senior officials and managers	United Nations Development Program	http://hdr.undp.org
		Executive accountability	Global Integrity (Global Integrity Index)	http://www.globalintegrity.org
		Corruption perception index	Transparency International	www.transparensy.org
	Process dimension	Quality of public administration	World Bank Group, CPIA database	/idahttp://www.worldbank.org
		Average gov't wage to per capita GDP ratio	United Nation Public Administration Network	www.unpan.org
		Compensation of employees (% of expense)	United Nation Public Administration Network	www.unpan.org

This study presents data collected on the international status of selected countries. Data was collected from international databases including the World Economic Forum, UNESCO, World Database of Happiness, Global Integrity, Transparency International Organization, and the International Labor Organization. To measure wellbeing, ten elements from wellbeing and progress indices were used. Adopted from D'Acci (2010), these were Gross Domestic Product, the GINI coefficient, employment, happiness, life expectancy at birth, education, the number of studies, gender equity, freedom, and the number of intentional homicides. During factor analysis, two wellbeing indices (employment and the number of intentional homicides) were discarded because of low validity. To measure national competitive capacity, the World Economic Forum indices were used. Moreover, good governance was measured using World Bank indices, while human capital in the public sector was measured according to Amit and Belcort's (1999) content and process dimensions of human capital. In this research, we designed indices for this category based on a literature review and exploratory factor analysis. The content dimension of human capital includes indices such as "the number of researchers in the public sector" and "the accountability of public managers." The process dimension of human capital includes indices such as "the quality of public administration." Table 2 lists the variables, their dimensions and indicators, and the databases used in this study.

Normalized or standardized data was needed to conduct tests and compile data. A data standardizing process was applied to standardize indices.

SEM combines capabilities of factor analysis and multiple regressions to estimate a series of interrelated relationships among variables simultaneously (Baron & Kenny, 1986), and this goal was pursued in this research as well. For SEM, at first factor analysis was conducted for variables and their dimensions. Then the assessed measurement model and finally the fitness of the model were considered.

Factor analysis was used to measure construct validity. Confirmative factor analysis was conducted to determine whether these indices measured the intended variables. In doing factor analysis, we must first address the issue that if the existing data can be used for analysis. For this reason, KMO and Bartlett's Test of Sphericity was used. Kaiser-Meyer-Olkin (KMO) Test is a measure of how suited data is for Factor Analysis. The test measures sampling adequacy for each variable in the model and for the complete model. The statistic is a measure of the proportion of variance among variables that might be the common variance (Vogt, 2005). The Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity were conducted to evaluate the factorability. Consequently, of the 40 indices, five ones were removed. Reliability was measured through Cronbach's alpha. The results of validity and reliability tests for research variables are provided in Table 3.

Research Findings

To test research hypotheses, first, a Pearson correlation test was conducted using SPSS 15 to measure the correlation between research variables (because of variable types that are interval and ratio). Then, causal relationships between research variables were tested through structural equation modeling using Lisrel 8.54 software. Table 4 provides the results of the correlation test. The coefficients indicate a meaningful correlation (99% confidence) between research variables regarding hypotheses.

Table 3. The Results of Reliability and Validity Tests for Research Variables

Variable	Dimensions	Indicators	KMO criteria	Bartlet Coefficient	Cronbach Alpha coefficient
National wellbeing	Objective wellbeing	GINI GDP Expected years of schooling (years) Number of researchers Freedom	0.856	0.000	0.879
	Subjective wellbeing	Gender equality Life expectancy at birth (years) Happiness	0.873	0.000	0.883
Good governance	-	Control of corruption Role of law Regulatory quality Government effectiveness Political stability Voice and accountability	0.916	0.000	0.969
National competitiveness capacity	Fundamental requirements	Institution Infrastructure Macroeconomic stability Health and primary education	0.70	0.000	0.860
	Efficiency enhancers	Higher education and training Good market efficiency Labor market efficiency Financial market sophistication Technological readiness Market size	0.843	0.000	0.882
	Effective factors on innovation	Business sophistication Innovation	0.612	0.000	0.954
Human capital in public sector	Content dimension	Number of researcher in public sector Education employees in public Sector Woman in government managerial position Female Senior officials and managers Executive accountability Corruption perception index	0.665	0.000	0.783
	Process dimension	Quality of public administration Average gov't wage to per capita GDP ratio Compensation of employees (% of expense)	0.615	0.000	0.692

Table 4. The Results of Correlation Hypotheses

Hypothesis	Correlation coefficient	Sig (2- tailed)	Results
There is a meaningful relationship between human capital in public sector and the promotion of national wellbeing	0.8894	0.000	Confirmed
There is a meaningful relationship between human capital in public sector and the enhancement of national competitiveness	0.828	0.000	Confirmed
There is a meaningful relationship between national competitiveness and the enhancement of good governance	0.855	0.000	Confirmed
There is a meaningful relationship between good governance and the promotion of national wellbeing level	0.846	0.000	Confirmed

After considering relationships between variables separately that provide context for testing sub-hypothesis, it was turn to consider final integrated model of research. In fact, SEM can be divided into parts. The measurement model is the part that relates measured variable to latent variables. The structural model is the part that relates latent variables to one another.

Prior to testing the hypothesized structural model, we tested to see if the measurement model had a good fit. To confirm the structural model or path diagram, indices should demonstrate good fitness, and meaningful t-value and standard coefficients should be evident. A model has good fitness when the χ^2 value is low, degree of freedom is less than 3, RMSEA is less than 0.08, and GFI and AGFI are more than 0.90%. If the t-value measures are more than 2 or less than -2, it is meaningful at a 0.99% confidence level. The results of the goodness of fit test are reflected in Table 4.

Table 5. Result of Goodness of Fit Test

Grouping indices	indices	Abbreviation title	Primary results	Acceptable fit
Absolute fit indices	Goodness of fit index	GFI	0.92	> 0.9
	Adjusted goodness of fit index	AGFI	0.90	> 0.9
Comparative Fit indices	Non-normed fit index	NNFI	0.93	> 0.9
	Normed fit index	NFI	0.95	> 0.9
	Comparative fit index	CFI	0.98	> 0.9
	Relative fit index	RFI	0.92	> 0.9
	Incremental fit index	IFI	0.98	> 0.9
	Parsimony normed fit index	PNFI	0.94	> 0.50
Parsimony fit indices	Root mean square error of approximation	RMSEA	0.076	<0.08
	Chi-square of df ration	CMIN/df	3	Between 1-3

Table 5 results indicate that GFI, AGFI, NNFI, NFI, CFI, RFI, IFI are > 0.9, RMSEA is <0.08, the Chi^2 ratio to degree of freedom is less than 3, and other indices are acceptable. Therefore, the model's goodness of fit is confirmed. In the following pages the, integrated measurement model and the meaningful model are shown in figures 1 and 2.

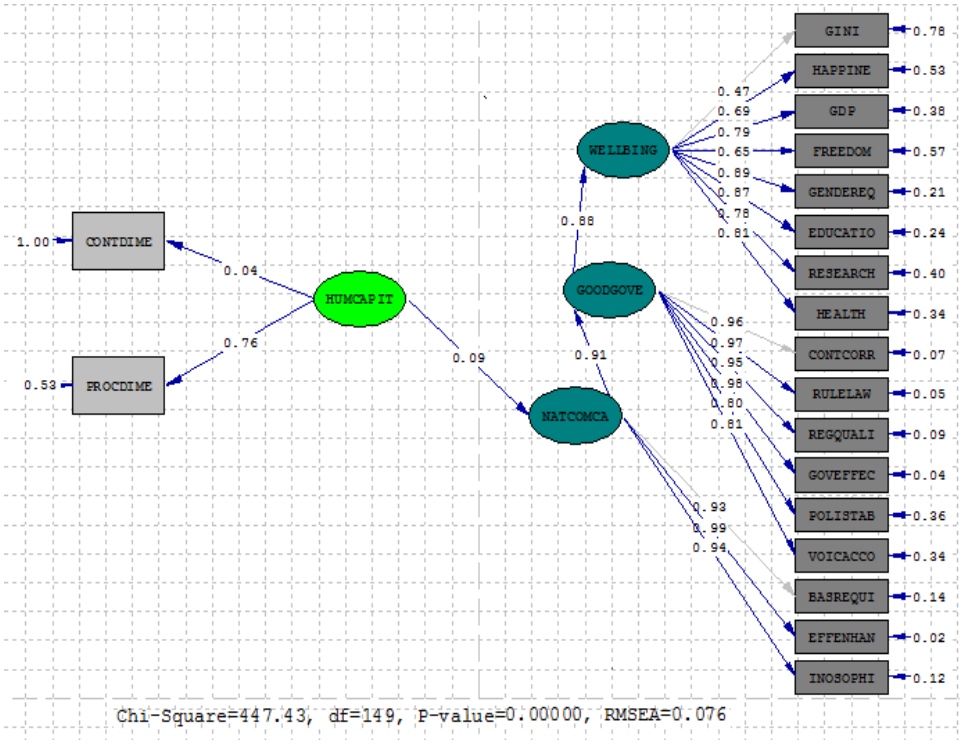

Figure 1. Measurement Model

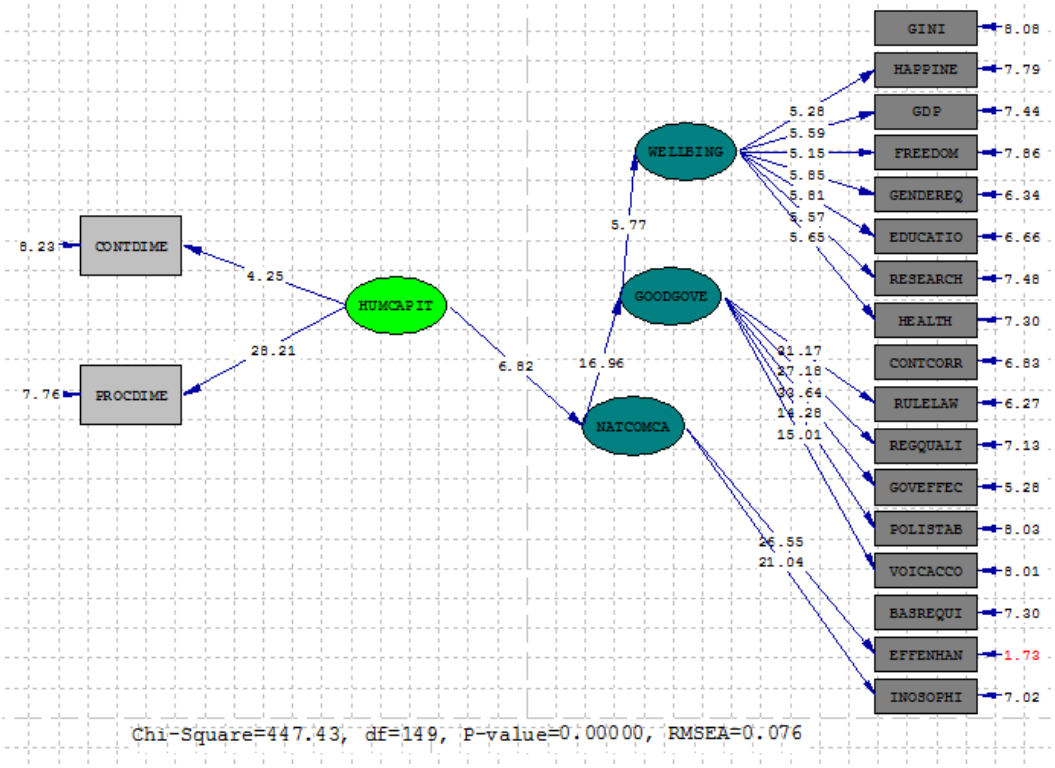

Figure 2. Meaningful Relationship Diagram Between Research Variables

Discussion and Conclusions

This research was based on the idea of promoting national wellbeing from macro-level perspectives and focusing on human capital in the public sector. The main hypothesis of the research indicates the effect of human capital in the public sector on promoting national wellbeing. The research findings confirm this hypothesis. Providing welfare and proper living conditions and promoting living standards for all levels of society form the primary mission of public managers and agents. By virtue of the full authority of the government, control over a large volume of financial and budget information and resources, accessibility to media, and bureaucracy, the public sector (or the executive power) plays a significant role in decision making (Howlett & Ramesh, 2001). There is also no doubt regarding the effect of human capital. The fact that human capital is a decisive element of successful performance of any organization (including governments) cannot be questioned. High performing organizations depend on high performing people (Skorkova, 2016). However, common to these studies is qualified human resources (Barro & martin, 1995). Boyte (2005) describes public sector employees as those who have the responsibility and authority to solve social problems (Hosseini, 2010).

The first secondary hypothesis of this research suggested the impact of public sector human capital on the promotion of national competitive capacity. The research findings confirmed this hypothesis in all countries. Aligned to this finding, Cho (1998) proposes that two physical and human factors affect competitiveness. Here, the role of human factors is more significant, since it directs national economy through combining and regulating physical factors to maximize competitiveness. Cho believes that politicians formulate economic policies and bureaucrats practically apply these policies to the economy. Both play some role in recombining current resources in the environment. If they do this efficiently, they promote their countries' competitiveness (Cho, 1998). To some extent, the political structures of countries and communities and the requirements of governing each country justifies

rationality-based planning. According to this theory, planners are elite individuals who set goals and consider the alternatives and outcomes of each decision (Brooks, 2006).

The second secondary hypothesis of this study suggested the impact of national competitive capacity on good governance. The research findings confirmed this hypothesis in all countries. By establishing capable institutions, governments can provide a suitable environment wherein to regulate the society's economic relations. The presence of suitable institutions improves the quality of public services, since inappropriately sized governments lead to corruption (Nasibli, 2009). Moreover, using information technology creates an effective government better equipped to provide public services, public accessibility to information, enhanced quality, more flexible organizations, government accountability to citizens, and enhanced relationships between citizens and authorities. Together, these can reduce corruption.

The third secondary hypothesis of the research was that good governance promotes national wellbeing. Good governance is the cornerstone of growth, development, and government competitiveness in the global environment (Kickert et al., 1997). International financial institutions believe that good governance is crucial in fulfilling development programs and great for promoting development. Good governance influences wellbeing in two ways. The first is through direct influence, for example, when citizens' participation in elections leads to their satisfaction. The second is indirect influence, where good governance improves citizens' happiness and wellbeing by creating conditions such as financial progress, quality education, and safety (Ott, 2010). These findings are aligned with those of Helliwell and Huang (2008), who concluded a strong relationship between good governance and life satisfaction. They found that the technical quality of governance is related more to happiness than democratic quality. In addition, governments should satisfy at least the technical quality of governance before democratic quality (Helliwell & Huang, 2008). In another study, Chong and Gradstein (2004) concluded that improving governance indices could decrease income inequality (Chong & Gradstein, 2004). Based on the findings of this study, the following recommendations are proposed.

1. In the field of human capital management in the public sector:
    - Institutionalize a "competence-based recruitment" culture in public organizations;
    - Use all employment capacity; for example, include women;
    - Implement a results-oriented performance evaluation system in public organizations;
    - Decentralize structure to ensure employees' participation, and
    - Create multifaceted accountability system.
2. To promote national competitive capacity:
    - Provide suitable physical, administrative, and informational infrastructure;
    - Develop appropriate monetary and financial systems for economic stability;
    - Promote the expertise of society's workforce through academic and professional education
    - Try to apply and commercialize advanced technologies;
    - Make proper investment in research and development;
    - Establish a suitable environment to attract direct and indirect investment, and
    - Support local investment, which is more than the responsibility of the private sector.
3. To advance good governance:

- Create a proper legal system in the light of law governance;
- Create an efficient administrative system to reduce national corruption at all levels;

- Clarify the legislation process and performance of executive institutions;
- Provide the grounds for fulfilling individual's participation in public affairs, and
- Aim for stability in government programs to ensure a more predictable future environment.

Finally, as areas of further research, we propose a more precise investigation of variables pertaining to national wellbeing and human capital in the public sector (such as governance quality, quality of life, happiness, sustainable development, cognitive capital, etc.), a comparative study of different groups of countries (such as G8, D 8, G-20, BRICS, etc.) using variables not used in the present study, and redefining and completing the indices of the "human capital in the public sector".

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