

The Role of Intellectual Capital in Organizational Performance: A Study of Small and Medium Businesses In Erbil

Ari Hameed & Aysen Berberoğlu

Abstract:

The main aim of this study is to investigate the relationship between three main intellectual capital's element which they are; human capital consists of learning and education, experience and expertise, innovation and creation, the second element is structural capital which consists of system and program, research and development, intellectual property rights and third element is relationship capital which consists of strategic alliance, relationship with partners, suppliers and customers, knowledge about partners, suppliers and customers. A quantitative method applied to measure the relationship between intellectual capital and SMB performance. A random sampling method applied to find out the relationship between Intellectual capital and SMB Performance. The research was conducted in the Small and Medium Businesses in Erbil. A total of 400 questionnaires were distributed in the Small and Medium Businesses, however 312 questionnaires were received and being completed properly, and the data were collected through in hard copies. The authors applied multiple regression analysis to measure the nine research hypotheses developed by the authors, the findings revealed that the highest value was for learning and education dimension's relationship with SMB performance on the other hand the lowest value was for experience and expertise's relationship with SMB performance in Erbil.



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Introduction

Small and Medium businesses have a significant role in a country's economy. It is a fact for both developing and developed countries. Furthermore, Small and Medium businesses comprise a high amount of a country's enterprise activities and create more employment chances than the large businesses in the last decade. The expansion and growth of small and medium businesses should be a component in an inclusive strategy developed and planned to expand the economy of Northern Iraq and encourage the establishment of productive occupations. Small and Medium businesses are the zone of the economy that requests attention of the government of Northern Iraq and some other countries, the research is because the significant role that small and medium businesses have in creating job vacancies and opportunities, also developing the region's economic. Moreover, Small and Medium businesses have a central role in the growth of economy, through providing employment opportunities; it can be done through innovation and highlighting vitality and market (Suroso et al. 2017). Small and Medium businesses are businesses that are owned privately by shareholder/s and managed, with few workers and fairly fair amount of sales. Small and Medium businesses could be established with lower business cost. Small and Medium businesses in addition are accessible through online marketing to facilitate purchasing and get closer to the customers. One of benefits of having small and medium businesses is the independence. A review of small and medium enterprises owners proved that 38% of employment turnover from one particular business to another one, stated the reason of their leaving was to own an independence and running business privately (Passaro, et al. 2018). Small and Medium businesses are important in nowadays country's economy due to the highest percentage of revenue gained through government taxes. Furthermore, the establishing Small and Medium businesses could inspire the country's economy and enhancing the global economies. Moreover, Small and Medium businesses are vital due to providing more employment chances for individual, accordingly decreasing the percentage of unemployment in the country (Ramadan et al. 2017). At the present time, there are no wide literatures that investigated intellectual capital can affect organizational performance in Small and Medium businesses in Northern Iraq. In the last decades, a huge awareness and attention needed to implement an effective intellectual capital in small and medium businesses; this will add considerably the value of establishing and improving organizational performance (Novas et al. 2017). Small and medium businesses have recognized that they need intellectual capital assets to encompass competitive advantages and enhance organizational performance, this is the main reason of focusing on intellectual capital phenomenon because will have positive and significant relationship with organizational performance (Nieves & Quintana, 2018). Since these concepts are identified to be critical for economies exclusively, in this study the researcher intrigued by investigating their significance when they are assembled, as there is a significant association between the intellectual capital and organizational performance in small and medium business that will address. Regardless their concepts significance, there have been a few researches investigating the association between the IC, and the organizational performance (Martin-Sardesai & Guthrie, 2018). Past work has concentrated on the estimation and definition of these ideas, yet few researchers have analyzed their association with organizational performance (Di Berardino & Corsi, 2018). Many highlights have been created on the particular features of the intellectual capital, especially concerning the effectiveness and ineffectiveness of organizational performance, however these features are usually not more precise, only as other significant affects are left to be studied and analyzed. The researcher attempted to give a hypothetical system to the ideas under dialog to offer the reader the

suitable foundation for the examination to be introduced. The IC achievement will initially be dissected freely, showing a few interrelationships between the ideas.

1.1 The aim of the study

The main aim of this study is to investigate the relationship between three main intellectual capital's element which they are; human capital consists of learning and education, experience and expertise, innovation and creation, the second element is structural capital which consists of system and program, research and development, intellectual property rights and third element is relationship capital which consists of strategic alliance, relationship with partners, suppliers and customers, knowledge about partners, suppliers and customers. The aim this study is to explain intellectual capital and it's the origin of the differences between the market value of a company and its book value. Therefore, business's value could be demonstrated in an accurate way, which will be a significant fact for investors. Intellectual capital measurement has one more important dimension, which is to provide a better managing. Only if we know the real value of a company, we will be able to manage the increase of this value. The most significant values of a company are not always visible in its financial reports.

1.2 Research questions

Research Question -1- Is there relationship between intellectual capital and small and medium businesses performance?

Research Question -2- Is there relationship significant relationship between human capital and small and medium businesses performance?

Research Question -3- Is there relationship significant relationship between structural capital and small and medium businesses performance?

Research Question -4- Is there relationship significant relationship between relational capital and small and medium businesses performance?

Research Question -5- Which intellectual capital's element will have more significant relationship with overall small and medium businesses performance?

1.3 Research Objectives

The aim this study will be to achieve quantitative and statistical findings from a sample to explore those findings deeply for following objectives:

- Yet, only some empirical researchers of intellectual capital carried out for instance, studies conducted by (Shook, 2002; Bontis, et al., 2001; Hayton,2002; Bontis,1998, and Youndt, 1998), present several common evidence that component of intellectual capital or the concept of intellectual capital is significantly and positively related to organizational performance. In the current research additional examine is to be conducted on the relationship of each component of intellectual capital separately with organizational performance in small and medium businesses in the Northern Iraq.
- To classify the level of intellectual capital accessibility and which intellectual capital's component has a more positive and significant relationship with organizational performance in small and medium businesses in the Northern Iraq.
- To examine the significant of organizational performance and leveraging of IC in organizational performance in small and medium businesses in the Northern Iraq, to obtain enterprise competitiveness, in the current and future enterprise environment, moreover, to illustrate the significant and related performance enhancement, in its essential enterprise matter.
- To suggest to small and medium businesses in the Northern Iraq, to adopt, implement and accept the suggestions anticipated in this research, with the proper adaptation or adjustment and organizational performance matter.

- To find out the significant relationship between Learning & Education (L&E) and small and medium businesses performance.
- To find out the significant relationship between Experience & Expertise (E&E) and small and medium businesses performance.
- To find out the significant relationship between Innovation & Creation (I&C) and small and medium businesses performance.
- To find out the significant relationship between systems & programs (S&P) and small and medium businesses performance.
- To find out the significant relationship between research & development (R&D) and small and medium businesses performance.
- To find out the significant relationship between intellectual property right (IPR) and small and medium businesses performance.
- To find out the significant relationship between strategic alliance (SA) and small and medium businesses performance.
- To find out the significant relationship between relationship with partners, suppliers and customers (RPSC) and small and medium businesses performance.
- To find out the significant relationship between knowledge about partners, suppliers and customers (RPSC) and small and medium businesses performance.

1.4 Research Model

The authors developed a research model to measure the relationship between intellectual capital and SMB performance. The research model was adapted from the original founder of intellectual capital (Bontis, 2005), as it can be seen in the appendix.

1.5 Research Hypotheses:

H1: There is positive and significant relationship between Learning & Education (L&E) and small and medium businesses performance.

H2: There is positive and significant relationship between Experience & Expertise (E&E) and small and medium businesses performance.

H3: There is positive and significant relationship between Innovation & Creation (I&C) and small and medium businesses performance.

H4: There is positive and significant relationship between systems & programs (S&P) and small and medium businesses performance.

H5: There is positive and significant relationship between research & development (R&D) and small and medium businesses performance.

H6: There is positive and significant relationship between intellectual property right (IPR) and small and medium businesses performance.

H7: There is positive and significant relationship between strategic alliance (SA) and small and medium businesses performance.

H8: There is positive and significant relationship between relationship with partners, suppliers and customers (RPSC) and small and medium businesses performance.

H9: There is positive and significant relationship between knowledge about partners, suppliers and customers (RPSC) and small and medium businesses performance.

Justification for Study

The justification for the current research is several of previous scholars in the domain of intellectual capital have proved their outcomes to just utilizing essentially the quantitative analysis. Only some scholars have conducted researches based on case study method, and just few have carried out their studies in mixed research methodology.

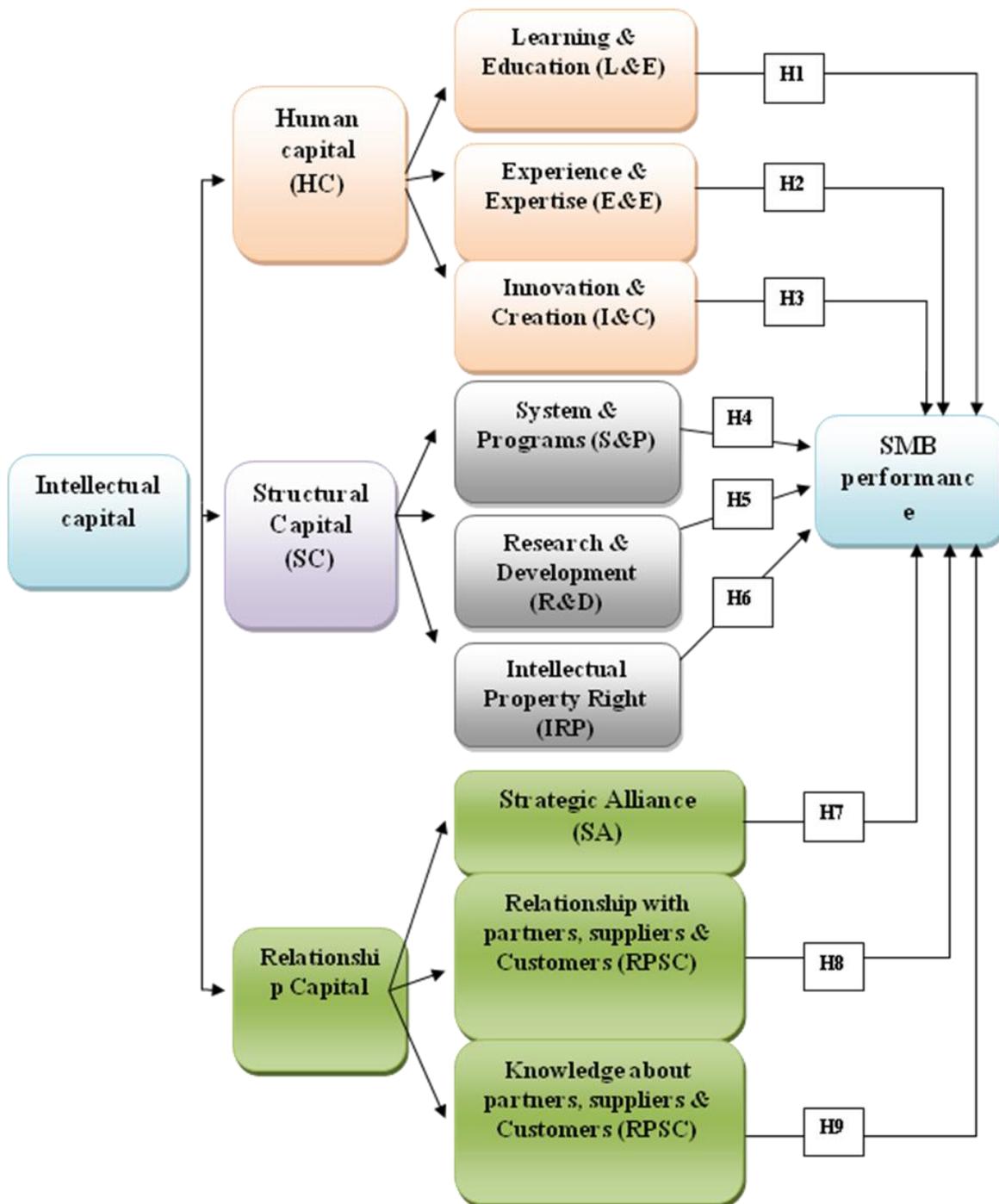


Figure 1-Research Model, Bontis,2005

2. Literature Review

2.1 Intellectual Capital and its Classification

According to (Dhar, et al. 2017), intellectual capital was more than unadulterated mind but instead joined in scholarly activity. From that point forward, intellectual capital has turned into a conspicuous research subject because of the improvement of the new economy that is driven by data and information (Ataseven et al. 2018). It has been demonstrated that

intellectual capital is viewed as an arrangement of intangibles containing assets, capacities and capabilities that improve execution and esteem creation (Mohammadi & Taherkhani, 2017). Throughout the years, exact investigations looking at the advancement, utilize and execution impacts of intellectual capital have enormously expanded (Leem & Rogers, 2017). Likewise, scientists and professionals have perceived that intellectual capital is a basic asset and a driver for firm feasible intensity, firm execution (Madhavaram & Hunt, 2017), authoritative esteem creation and financial development. Advancement is another viewpoint identified with execution that has been recognized as a key driver to efficiency and monetary development. Development is set as the result of interests in intangibles, subsequently recommending a nearby connection between intellectual capital and advancement (Ferreira & Franco, 2017). At the end of the day, advancement ability of firms depends very on the scholarly resources and learning they have attest, 'It is generally acknowledged that an association's capacity to improve is firmly fixing to its intellectual capital, or its capacity to use its learning assets' (Subramony, et al. 2018). Two floods of intellectual capital investigations and its association with development and firm execution win in the writing. The mainstream concentrates on the impacts of intellectual capital and its segments by embracing a multidimensional conceptualization of intellectual capital (Abazeed, 2017). Then again, scientists have examined the impacts of individual parts of intellectual capital, for example, human capital, authoritative capital or social capital. This present examination falls under the principal stream. It is vital to comprehend the effect of all parts of intellectual capital all the while in an examination on the grounds that the distinctive parts of intellectual capital are from time to time discovered working in disconnection in firms (Cheikh & Noubbigh, 2017).

2.1.1 Human Capital

Singh, (2017), addresses the human capital class as the most generally talked about inside IC, basically in light of its association with alternate classifications. This classification identifies with the learning, abilities and fitness of the business visionary and the representatives working in a firm. It has been stressed as a standout amongst the most critical resources, particularly in information exceptional organizations. We address information, experience and preparing in this classification. Human capital has been thought to be the key asset behind maintainable upper hand (Rosman et al. 2018). Interest in human capital is relied upon to offer approach to higher efficiency of people. Likewise constitute to the human capital class as both, the more extensive human asset contemplations of the business workforce and the more particular necessities of individual ability as information, aptitudes and traits of representatives. The essential part of intellectual capital is human capital (Maji & Goswami, 2017). Human capital is characterized as the information, aptitudes, and capacities living with and utilized by single representatives (Secundo et al. 2017). As human capital is one of the key assets basic to firm achievement as far as constant advancement, human capital should be created to enhance workers' aptitudes and information which eventually builds firm execution.

2.1.2 Structural Capital

The structural capital class, in some cases likewise indicated to as structural capital, identifies with the learning that has been standardized inside the procedures, schedules and culture of the association (Wong et al. 2018). Research and development, hierarchical structures, and authoritative culture, to specify a couple, can be examined in this class. (Liu, 2017), underlines this class as a wellspring of upper hand as it creates persistent change in the productivity or viability of the company's execution of item showcase exercises. Structural

capital manages the structure and the data frameworks which can prompt business. As we talked about beforehand, human capital is the essential factor for creating structural capital.

2.1.3 Customer Capital (CC)

Customer capital, otherwise called social capital or outside capital comprises of associations with clients and providers, the legislature or related industry affiliations, mark names, trademarks and notoriety. As per (Wong et al. 2018), it indicates o the "association's connections or system of partners and their fulfillment with and devotion to the organization". As per (Secundo et al. 2018), customer capital is characterized as the learning implanted in the advertising channels and client connections. Customer capital is additionally a standout amongst the most vital segments of intellectual capital. Customer capital basically in view of advertising ability, client faithfulness, and association with client and client fulfillments (de Villiers & Sharma, 2017).

2.2 Small and Medium Businesses

There is no uniform meaning of small and medium business accessible as it changes from nation to nation. The meaning of small and medium business is predominantly in light of three qualities, to be specific number of representatives, paid-up capital and yearly incomes (Rossi et al. 2016). The real quality of Small and medium business exists in development, great system, one of a kind ability, quick correspondence, less organization, close contact to advertise and inside, and so forth which is critical for advancement and achievement. The greater part of the examination thinks about featured that Small and medium business has confronted absence of substantial assets, for example, physical and money related capital; along these lines in this information based economy the test for the Small and medium business is to use their impalpable assets, their intellectual capital implanted in their association. Small and medium business should be more mindful of the significance and utilizations of intellectual capital. Intellectual capital has turns into an essential determinant of upper hands (Avci & Nassar, 2017).

2.3 Small and Medium Businesses

Organizational performance is viewed as an essential issue for both benefit and non-benefit associations. Enhancing firm performance is something that most associations endeavor to accomplish (Habersam et al. 2018). A portion of the components revealed in writing to have an effect on organizational performance and its change include authoritative culture, association's condition and procedure, individual and hierarchical learning, and representative contribution and sense of duty regarding authoritative objectives. Writing gives numerous definitions to hierarchical performance. As indicated by (Di Berardino & Corsi, 2018), performance indicates to the capacity of an association to make results and activities at an adequate level. Also, (Obeidat et al. 2017) said that organizational performance indicates to the extent that an association addresses its own particular issues and its partner needs with a specific end goal to survive. Moreover, (Bontis et al. 2015), indicated to authoritative performance as a measure of how well an association accomplishes its targets. Estimating organizational performance can be performed utilizing different targets and estimations. Notwithstanding, playing out this undertaking isn't simple with regards to estimating organizational performance depending entirely on budgetary measures is in adequate, non-money related measures ought to be utilized too. (Botelho, 2017), recommended estimating authoritative performance utilizing five measurements that include: advancement, rate of new item improvement, consumer loyalty, client maintenance, and working expenses. Then again, (Wang et al. 2014), proposed four measurements for estimating authoritative performance these include: return on resources, return on value, income development, and representative efficiency. This study utilizes the measurements of

operational performance and budgetary performance as proposed by (Al-Musali & Ismail, 2014).

3. Methodology

A quantitative method applied to measure the relationship between intellectual capital and SMB performance. A random sampling method applied to find out the relationship between Intellectual capital and SMB Performance. The research was conducted in the Small and Medium Businesses in Erbil. A total of 400 questionnaires were distributed in the Small and Medium Businesses, however 312 questionnaires were received and being completed properly, and the data were collected through in hard copies.

4. Analysis

4.1 Reliability analysis

The authors applied reliability measurement to examine the nine variables' reliability which used to measure the relationship between intellectual capital and SMB performance in Erbil. It was found that 10 questions used to measure the dimension of learning and education, the value of alpha was .748, 10 questions used to measure the dimension of experience and expertise, the value of alpha was .725, 10 questions used to measure the dimension of innovation and creation, the value of alpha was .831, 10 questions used to measure the dimension of systems and programs, the value of alpha was .721, 10 questions used to measure the dimension of research and development, the value of alpha was .744, 10 questions used to measure the dimension of intellectual property right, the value of alpha was .756, 10 questions used to measure the dimension of strategic alliance, the value of alpha was .787, 10 questions used to measure the dimension of relation with RPSC, the value of alpha was .768, 10 questions used to measure the dimension of knowledge about RPSC, the value of alpha was .776, and 10 questions used to measure the dimension of SMB performance, the value of alpha was .821. however, the findings of reliability analysis showed that all nine independent variables and a dependent variable were reliable for the current study, as it can be seen in table (1).

Table-1: Reliability Analysis

No	Variables	N of items	Cronbach Alpha
1	Learning & Education	10	.748
2	Experience & Expertise	10	.725
3	Innovation & Creation	10	.831
4	Systems & programs	10	.721
5	Research & Development	10	.744
6	Intellectual Property Right	10	.756
7	Strategic Alliance	10	.787
8	Relation with RPSC	10	.768
9	Knowledge about RPSC	10	.776
10	SMB Performance	10	.821

4.2 Correlation analysis

The authors applied correlation analysis to measure the association between nine independent variables and a dependent variable. The findings showed that the correlation between Learning & Education and SMB performance was .737** this proves that there is a strong association between Learning & Education and SMB performance in Erbil, moreover, the correlation between Experience & Expertise and SMB performance was .682** this proves

that there is a strong association between Learning & Education and SMB performance in Erbil, the correlation between Innovation & Creation and SMB performance was .823** this proves that there is a strong association between Learning & Education and SMB performance in Erbil, the correlation between Systems & programs and SMB performance was .626** this proves that there is a strong association between Learning & Education and SMB performance in Erbil, the correlation between Research & Development and SMB performance was .653** this proves that there is a strong association between Learning & Education and SMB performance in Erbil, the correlation between Intellectual Property Right and SMB performance was .689** this proves that there is a strong association between Learning & Education and SMB performance in Erbil, the correlation between Strategic Alliance and SMB performance was .737** this proves that there is a strong association between Learning & Education and SMB performance in Erbil, the correlation between Relation with RPSC and SMB performance was .747** this proves that there is a strong association between Learning & Education and SMB performance in Erbil, and the correlation between Knowledge about RPSC and SMB performance was .741** this proves that there is a strong association between Learning & Education and SMB performance in Erbil, as it can be seen in table (2).

Table-2: Correlation Analysis

Correlations		
Items		SMB Performance
Learning & Education	Pearson Correlation	.737**
	Sig. (2-tailed)	.000
	N	312
Experience & Expertise	Pearson Correlation	.682**
	Sig. (2-tailed)	.000
	N	312
Innovation & Creation	Pearson Correlation	.823**
	Sig. (2-tailed)	.000
	N	312
Systems & programs	Pearson Correlation	.626**
	Sig. (2-tailed)	.000
	N	312
Research & Development	Pearson Correlation	.653**
	Sig. (2-tailed)	.000
	N	312
Intellectual Property Right	Pearson Correlation	.689**
	Sig. (2-tailed)	.000
	N	312
Strategic Alliance	Pearson Correlation	.737**
	Sig. (2-tailed)	.000
	N	312
Relation with RPSC	Pearson Correlation	.747**
	Sig. (2-tailed)	.000
	N	312
Knowledge about RPSC	Pearson Correlation	.741**
	Sig. (2-tailed)	.000
	N	312

** . Correlation is significant at the 0.01 level (2-tailed).

4.3 Multiple regression analysis

The authors applied multiple regression analysis to measure the nine research hypotheses developed by the authors, the findings showed that; in order to measure the first research hypothesis which is there is positive and significant relationship between Learning & Education (L&E) and small and medium businesses performance, the B value was .699 with P-value .000 this proves that the first research hypothesis is supported. In order to measure the second research hypothesis which is there is positive and significant relationship between Experience & Expertise (E&E) and small and medium businesses performance, the B value was .553 with P-value .000 this proves that the second research hypothesis is supported. In order to measure the third research hypothesis which is there is positive and significant relationship between Innovation & Creation (I&C) and small and medium businesses performance, the B value was .673 with P-value .000 this proves that the third research hypothesis is supported. In order to measure the fourth research hypothesis which is there is positive and significant relationship between systems & programs (S&P) and small and medium businesses performance, the B value was .529 with P-value .000 this proves that the fourth research hypothesis is supported. In order to measure the fifth research hypothesis which is there is positive and significant relationship between research & development (R&D) and small and medium businesses performance, the B value was .651 with P-value .000 this proves that the fifth research hypothesis is supported. In order to measure the sixth research hypothesis which is there is positive and significant relationship between intellectual property right (IPR) and small and medium businesses performance, the B value was .588 with P-value .000 this proves that the sixth research hypothesis is supported. In order to measure the seventh research hypothesis which is there is positive and significant relationship between strategic alliance (SA) and small and medium businesses performance, the B value was .633 with P-value .000 this proves that the seventh research hypothesis is supported. In order to measure the eighth research hypothesis which is there is positive and significant relationship between relationship with partners, suppliers and customers (RPSC) and small and medium businesses performance, the B value was .644 with P-value .000 this proves that the eighth research hypothesis is supported. In order to measure the ninth research hypothesis which is there is positive and significant relationship between knowledge about partners, suppliers and customers (RPSC) and small and medium businesses performance, the B value was .690 with P-value .000 this proves that the ninth research hypothesis is supported.

Table-3: Coefficients

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.061	.153		6.925	.000
Learning & Education	.699	.036	.737	19.189	.000
Experience & Expertise	.553	.034	.682	16.411	.000
Innovation & Creation	.673	.026	.823	25.553	.000
Systems & programs	.529	.037	.626	14.127	.000
Research & Development	.651	.043	.653	15.191	.000
Intellectual Property Right	.588	.035	.689	16.751	.000
Strategic Alliance	.633	.033	.737	19.206	.000
Relation with RPSC	.664	.034	.747	19.781	.000
Knowledge about RPSC	.690	.036	.741	19.413	.000

a. Dependent Variable: SMB Performance

5. Conclusion

The main aim of this study is to investigate the relationship between three main intellectual capital's element which they are; human capital consists of learning and education, experience and expertise, innovation and creation, the second element is structural capital which consists of system and program, research and development, intellectual property rights and third element is relationship capital which consists of strategic alliance, relationship with partners, suppliers and customers, knowledge about partners, suppliers and customers. Intellectual capital is additionally viewed as an essential asset for Small and medium business. Small and medium business achievement is driven by the learning, knowledge and abilities controlled by the proprietors and workers. Most of the Small and medium business have impressive asset confinements regarding area, work and back, these organizations have extensive information spoke to in know-how, ability, tradecrafts, aptitudes, thoughts, instinct and bits of knowledge. Thus, Small and medium business can contend based on their know-how. Information must be utilized with the goal that organizations can accomplish their objectives. Firms that are fruitful at utilizing information are related with expanded efficiencies in operations, higher rates of effective developments, enhanced client benefit and expanded capacity to comprehend patterns and examples in the commercial center. The authors applied multiple regression analysis to measure the nine research hypotheses developed by the authors, the findings revealed that the highest value was for learning and education dimension's relationship with SMB performance on the other hand the lowest value was for experience and expertise's relationship with SMB performance in Erbil.

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