

ORGANIZATIONAL INNOVATION FACTORS, CAPABILITIES AND
ORGANIZATIONAL PERFORMANCE IN IRANIAN AUTOMOTIVE
INDUSTRY

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ORGANIZATIONAL INNOVATION FACTORS, CAPABILITIES AND
ORGANIZATIONAL PERFORMANCE IN IRANIAN AUTOMOTIVE
INDUSTRY

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DEDICATION

To my mother, who gave me endless love and pray.

To my wife, for her patience, support, love and for enduring the ups and down during the completion of this thesis.

To my close friend, **Mr. Seyed Mahdi Asefi** and his family who have continuously pray, support, encourage and have played a vital part in achieving my goals.

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ABSTRACT

Understanding the relationship between innovation and performance of firms for both large and small organisations is relevant for researchers and policy-makers. Many firms and organisations have begun to recognise that innovation proficiency is the key to building a sustainable competitive advantage for their products or services in a progressively crowded marketplace. Even though defining innovation capability through its antecedents is considered as a unique methodology, a theoretical and comprehensive study about the effects of internal and external innovation drivers on organisational performance is still scarce. This study addresses the deficiency of empirical studies by developing a comprehensive model to examine the effects of external innovation drivers and internal innovation drivers namely organisational culture and intellectual capital on organisational performance directly and through innovation capability. A quantitative methodology is used to investigate the relationship paths. Data were collected from 275 companies in the automotive sector in Iran by using a cross-sectional survey method. Partial Least Squares Structural Equation Modelling (PLS-SEM) was used in the hypotheses testing. The results indicate that internal and external organisational innovation has a positive and significant relationship with organisational performance directly and through organisational innovation. Fundamentally, the results of this study can assist organisations and academic bodies to expand their knowledge on the role of innovation drivers and the capability of organisational performance in automotive industry.

ABSTRAK

Pemahaman tentang hubungan antara inovasi dan prestasi firma untuk organisasi yang kecil dan besar adalah penting kepada para penyelidik dan pembuat polisi. Kebanyakan syarikat dan organisasi telah mula menyedari tentang kepentingan inovasi serta kemampuannya sebagai kunci untuk membina daya saing yang berterusan dalam pasaran produk dan perkhidmatan yang semakin berkembang pesat. Walaupun huraian tentang keupayaan inovasi oleh kajian terdahulu dianggap sebagai satu metodologi yang unik, kajian teori dan kajian komprehensif tentang kesan pemacu inovasi dalaman dan luaran terhadap prestasi organisasi masih berkurangan. Kajian ini membincangkan mengenai kekurangan kajian empirikal, sekaligus membangunkan model komprehensif untuk mengkaji kesan pemacu inovasi luaran dan inovasi dalaman, yang terdiri dari budaya organisasi dan modal intelektual, terhadap prestasi organisasi secara langsung serta melalui keupayaan inovasi tersebut. Kaedah kuantitatif digunakan untuk mengenal pasti arah hubungan dengan menggunakan kaedah kaji selidik rentas. Data dikutip daripada 275 syarikat dari sektor automotif di Iran. Hipotesis kajian diuji menggunakan kaedah Permodelan Persamaan Berstruktur Kuasa Dua Terkecil Separa atau PLS-SEM. Hasil kajian menunjukkan bahawa inovasi organisasi dalaman dan luaran mempunyai hubungan positif serta signifikan terhadap prestasi organisasi secara langsung dan melalui keupayaan inovasi organisasi dalam industri automotif di Iran. Secara amnya, hasil kajian ini dapat membantu organisasi dan badan akademik untuk mengembangkan pengetahuan mereka mengenai peranan pemacu inovasi dan keupayaan inovasi ke atas prestasi organisasi dalam industri automotif.

TABLE OF CONTENTS

	TITLE	PAGE
	DECLARATION	iii
	DEDICATION	iv
	ACKNOWLEDGEMENT	v
	ABSTRACT	vi
	ABSTRAK	vii
	TABLE OF CONTENTS	viii
	LIST OF TABLES	xv
	LIST OF FIGURES	xvii
	LIST OF ABBREVIATIONS	xviii
	LIST OF SYMBOLS	xix
	LIST OF APPENDICES	xx
CHAPTER 1	INTRODUCTION	1
1.1	Introduction	1
1.2	Background	1
	1.2.1 Iranian Automotive Industry	3
1.3	Problem Statement	6
1.4	Research Questions	10
1.5	Research Objectives	10
1.6	Significance of the Study	11
1.7	Scope of the Study	12
1.8	Definition of Terms	12
	1.8.1 External Organizational Innovation Factors	13
	1.8.2 Internal Organizational Innovation Factor	13
	1.8.2.1 Intellectual Capital	13
	1.8.2.2 Organizational Culture	13
	1.8.3 Innovation Capability	14

	1.8.4 Performance	14
1.9	Organization of the Thesis	14
CHAPTER 2	LITERATURE REVIEW	17
2.1	Introduction	17
2.2	Innovation and It's Development	17
2.3	Organizational Performance	20
	2.3.1 The Effect of Innovation-Related Factors on Organization Performance	24
	2.3.2 The Relationship of Intellectual Capital on Organizational Performance	28
	2.3.3 Innovation Theory and Organizational Performance in Automotive Industry	29
2.4	External Innovation Factors	34
	2.4.1 Technology Advances	35
	2.4.2 Globalization	37
	2.4.3 Competitive Pressure	39
	2.4.4 Demanding Customers	41
	2.4.5 Shortening Product Life Cycle	42
2.5	Internal Innovation Factors	44
	2.5.1 Intellectual Capital	44
	2.5.1.1 Human Capital	46
	2.5.1.2 Structural Capital	47
	2.5.1.3 Relational Capital	48
	2.5.2 Organizational Culture	48
	2.5.2.1 Dominant Organizational Characteristic	54
	2.5.2.2 Organizational Leadership	55
	2.5.2.3 Management of Employees	55
	2.5.2.4 Organizational Glue	56
	2.5.2.5 Strategic Emphasis	57
	2.5.2.6 Criteria of Success	58
2.6	Models of Organizational Cultures	58

2.6.1	Schein Model of Organizational Culture	59
2.6.2	The Competing Values Framework (CVF)	60
2.6.3	CVFs Sub-Cultures	62
2.6.4	Reasons to Select the CVFs Framework	64
2.7	Organization Culture and Innovation	64
2.8	Innovation Capability	66
2.8.1	Participatory Leadership Culture	67
2.8.2	Ideation and Organizing Structure	68
2.8.3	Work Climate and Wellbeing	69
2.8.4	Know-How Development	70
2.8.5	Regeneration	71
2.8.6	External Knowledge	72
2.8.7	Individual Activity	72
2.9	The Underlying Theory	73
2.9.1	Resources and Capabilities	74
2.9.2	Asset Gathering as a Developmental Process	76
2.9.3	A Resource – Based Theory’s Capacity to Innovate	77
2.9.4	Theoretical Linkages and Empirical Evidences	78
2.9.5	Theory of Dynamic Capabilities	79
2.10	Review of Some Established Theoretical Models	80
2.10.1	Zerenler <i>et al.</i> (2008) Model	80
2.10.2	Saunila Model <i>et al.</i> (2016)	81
2.10.3	Zhang Model (2009)	82
2.11	Research Gap	83
2.12	Proposed Research Model	84
2.12.1	Intellectual Capital and Organizational Innovation Capability	86
2.13	Hypothesis Development	87
2.13.1	Intellectual Capital and Organizational Innovation Capability	87
2.13.2	Organizational Culture and Organizational Innovation Capability	88

2.13.3	External Factors and Organizational Innovation Capability	89
2.13.4	Organizational Innovation Capability and Organizational Performance	90
2.13.5	Intellectual Capital and Organizational Performance	91
2.13.6	External Innovation Factors and Organizational Performance	93
2.13.7	Organizational Culture and Organizational Performance	94
2.13.8	The Mediating Effects of Organizational Innovation Capability	95
2.14	Chapter Summary	97
CHAPTER 3	RESEARCH METHODOLOGY	99
3.1	Introduction	99
3.2	The Research Paradigm	99
3.3	The Research Method	100
3.4	The Research Design	100
3.5	Population	101
3.6	Sampling Technique	101
3.7	Sampling Size	102
3.8	Unit of Analysis	102
3.9	The Research Instrument Development	103
3.9.1	Measures of Constructs	103
3.9.1.1	External Innovation Factors	103
3.9.1.2	Intellectual Capital	103
3.9.1.3	Organizational Culture	104
3.9.1.4	Organizational Innovation Capability	104
3.9.1.5	Organizational Performance	104
3.9.2	Questionnaire Format	105
3.9.3	Instrument Translation Process	112
3.10	Pilot Study	113
3.11	Data Collection	114

3.11.1	Convergent Validity	114
3.11.2	Discriminant Validity	115
3.11.2.1	Root Mean Values of Extracted Variance	115
3.11.2.2	Cross-Loadings	116
3.12	Reliability of Measurement Tools	120
3.12.1	Alpha Cronbach	120
3.12.2	Composite Reliability	121
3.12.3	Factor Loading	121
3.12.4	Structure Model Evaluation	125
3.13	Summary of Chapter	128
CHAPTER 4	DATA ANALYSIS AND RESULTS	129
4.1	Introduction	129
4.2	Descriptive Statistics of the Study	129
4.2.1	Response Rate	130
4.3	Data Screening and Preliminary Analysis	130
4.3.1	Missing Data	131
4.3.2	Outliers	131
4.3.3	Homoscedasticity	132
4.3.4	Test of Normality	133
4.3.5	Multicollinearity	134
4.3.6	Descriptive Statistics of the Variable	137
4.3.7	Non-Response Biasness	138
4.3.8	Common Methods Bias	139
4.4	Evaluation Criteria for Structural Model Fitting	139
4.4.1	Determination of Coefficient (R²)	140
4.4.2	Predictive Relevance (Q²)	140
4.4.3	Effect Size (f²)	141
4.4.4	Goodness-of-Fit Index (GoF)	142
4.5	Hypothesis Testing	143
4.5.1	The Effect of Intellectual Capital (IC) and Organizational Innovation Capability (OIC)	143

4.5.2	The Effect of Organizational Culture (OC) and Organizational Innovation Capability (OIC)	143
4.5.3	The Effect of External Organizational Innovation Factors (EOIF) and Organizational Innovation Capability (OIC)	144
4.5.4	The Effect of Organizational Innovation Capability (OIC) and Organizational Performance (OP)	144
4.5.5	The Effect of Intellectual Capital (IC) and Organizational Performance (OP)	144
4.5.6	The Effect of Organizational Innovation Capability (OIC) and Organizational Performance (OP)	144
4.5.7	The Effect of Organizational Culture (OC) on Organizational Performance (OP)	145
4.6	Testing for Mediation	145
4.7	The Results of Main Hypotheses Testing	148
4.8	Chapter Summary	149
CHAPTER 5	DISCUSSION AND CONCLUSION	151
5.1	Introduction	151
5.2	Discussion from Empirical Findings	151
5.2.1	The Effect of Intellectual Capital (IC) on Organizational Innovation Capability (OIC)	152
5.2.2	The Effect of Organizational Culture (OC) and Organizational Innovation Capability (OIC)	152
5.2.3	The Relationship between External Organizational Innovation Factors (EOIF) and Organizational Innovation Capability (OIC)	153
5.2.4	The Effect of Organizational Innovation Capability (OIC) and Organizational Performance (OP)	154
5.2.5	The Effect of Intellectual Capital (IC) and Organizational Performance (OP)	154
5.2.6	The Effect of External Organizational Innovation (EOIF) and Organizational Performance (OP)	155
5.2.7	The Effect of Organizational Culture (OC) and Organizational Performance (OP)	155

5.2.8	The Effects of External Organizational Innovation Factors (EOIF) on Organizational Performance (OP) through Organizational Innovation Capability (OIC)	156
5.2.9	The Effects of Intellectual Capital (IC) on Organizational Performance (OP) through Organizational Innovation Capability (OIC)	157
5.2.10	The Effects of Organizational Culture (OC) on Organizational Performance (OP) through Organizational Innovation Capability (OIC)	157
5.3	Contribution of Study	158
5.3.1	Theoretical Contributions	158
5.3.2	Practical Contributions	160
5.4	Recommendations for Industries	160
5.5	Research Limitations	162
5.6	Future Research	163
5.7	Conclusion	164
	REFERENCES	165
	LIST OF PUBLICATIONS	245

LIST OF TABLES

TABLE NO.	TITLE	PAGE
Table 1.1	List of countries by motor vehicle production	4
Table 2.1	The two main disciplinary foundations of organizational culture	50
Table 2.2	Definitions of culture	51
Table 2.3	Source: Adapted from Hofstede (1981)	53
Table 2.4	Definition of innovation capability	66
Table 3.1	Distribution of the sample size based on type of industry	102
Table 3.2	Constructs used in this study	104
Table 3.3	Item for measuring organizational innovation factors	106
Table 3.4	Items for measuring intellectual capital	107
Table 3.5	Items for measuring organizational culture	109
Table 3.6	Items for measuring organizational innovation capability	110
Table 3.7	Items for measuring organizational performance	112
Table 3.8	Average Variance Extracted (AVE) of latent variable	115
Table 3.9	Correlations of latent variables	116
Table 3.10	Cross-loadings	116
Table 3.11	Cronbach's alpha	120
Table 3.12	Composite Reliability	121
Table 3.13	Factor loading	122
Table 3.14	Assessing reflective measurement models	126
Table 3.15	Assessing structural models	127
Table 4.1	Distribution of sampling plan based on industry type	130
Table 4.2	Examination of outliers	132
Table 4.3	Results of bivariate correlation	135
Table 4.4	Regression for observing VIF and tolerance effect	135
Table 4.5	Descriptive statistics on variables	137

Table 4.6	Observing non-response biasness through Mann-Whitney-U-Test	138
Table 4.7	Common method variance	139
Table 4.8	Determination of coefficient	140
Table 4.9	Predictive relevance	141
Table 4.10	Predictive relevance	142
Table 4.11	Goodness of Fit	143
Table 4.12	The main hypotheses outcomes	145
Table 4.13	The mediating effect of OIC on the relationship between EOIF and OP	146
Table 4.14	The mediating effect of OIC on the Relationship between IC and OP	147
Table 4.15	The mediating effect of OIC on the Relationship between OC and OP	147
Table 4.16	Summary results of second, third and fourth hypotheses	149

LIST OF FIGURES

FIGURE NO.	TITLE	PAGE
Figure 1.1	Automotive industry's sales growth by geographic location	2
Figure 1.2	Passenger vehicles production units in Iran	6
Figure 1.3	Commercial vehicle production in Iran	6
Figure 2.1	Schein's culture triangle	59
Figure 2.2	The competitive value framework	62
Figure 2.3	Zerenler et al. Model (2008)	80
Figure 2.4	Saunila et al. model (2016)	81
Figure 2.5	Zheng model (2009)	82
Figure 2.6	The proposed research model	85
Figure 2.7	H7: The mediating between organization innovation factors and organizational performance	86
Figure 2.8	H8: the mediating between intellectual capital and organizational performance	86
Figure 2.9	H9: The mediating between organizational culture and organizational performance	86
Figure 4.1	Profile of respondents	133
Figure 4.2	Examination of normality	134
Figure 4.3	Examination of normality	134
Figure 4.4	Graphical model of path coefficients (β)	148
Figure 4.5	The results of the T-Value in the form of a graph	148

LIST OF ABBREVIATIONS

AVE	-	Average Variance Extracted
BRICS	-	Brazil, Russia, India, China and South Africa
CEO	-	Chief Executive Officer
CFA	-	Confirmatory Factor Analysis
CMV	-	Common-Method Variance
CV	-	Commercial Vehicle
CVF	-	Competing Values Framework
DVs	-	Dependent Variables
EFA	-	Exploratory Factor Analysis
GDP	-	Gross domestic product
IC	-	Intellectual Capital
IDRO	-	Industrial Development and Renovation Organization
IKCO	-	Iran Khodro Company
IOS	-	International Organization for Standardization
ISF	-	Innovation Strategy Framework
IVs	-	Independent Variables
OC	-	Organization Culture
OEM	-	Original Equipment Manufacturing
OIC	-	Organization Innovation Capabilities
OICA	-	International Organization of Motor Vehicle Manufacturers
OIF	-	Organization Innovation Factors
OP	-	Organization Performance
PLS	-	Partial Least Squares
PV	-	Passenger Vehicle
R&D	-	Research departments
RoW	-	Rest of the world
SEMs	-	Small, Medium Enterprises
SUVs	-	Sport Utility Vehicles

LIST OF SYMBOLS

β	-	beta
α	-	alpha
τ	-	t-value
R^2	-	r-square
F	-	F-square
p	-	p-value
χ^2	-	Chi-square
Z	-	Z-score
n	-	Sample size
N	-	Population size

LIST OF APPENDICES

APPENDIX	TITLE	PAGE
Appendix A	Determining Sample Size from a Given Population	201
Appendix B	English Version Research Questionnaire	202
Appendix C	Persian Version Research Questionnaire	210
Appendix D	Permission Letter to Collect Data	220
Appendix E	Tests	221

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter sets the tone of this study. Following the chapter's introduction in Section 1.1, the study's background is given in Section 1.2 and then followed by a discussion about the problem statement in Section 1.3. The research questions and objectives come next in Sections 1.4 and 1.5, respectively. The study's significance is given in Section 1.6, followed then by the scope in Section 1.7. The definition of variables in section 1.8, then the thesis's organization is outlined in Section 1.9.

1.2 Background

The increasing trends in the corporate environment, such as rising consumer demands, decreasing product or service lifecycle, and technical complexity, make developing and maintaining a competitive edge a daunting task for most companies (Stefan and Bengtsson, 2017). Throughout several studies, including policy studies and industry white papers, the value of creativity throughout paving the way for market development has been addressed as Bhardwaj, 2019; Oliva *et al.*, 2019; Lendel and Varmus, 2014. Such relevance stems from the concept of creativity itself, which is characterized as "making an idea a solution that generates value for a consumer" (Skillicorn, 2016).

The automotive industry has grown significantly in all car-producing countries over the past century. In 2018, Statista reported sales of more than 79 million personal cars worldwide, with China and the United States having the most extensive manufacturing markets. Toyota, Ford, Daimler, and Volkswagen, which are multi-national car manufacturers, were among the largest car manufacturers in 2016, while

companies such as Continental, Denso, and Magna are among the largest manufacturer’s suppliers of auto parts.

In terms of workforce, an estimated 8% of the world's economically active population is, directly and indirectly, involve in the automotive industry (Cruz Alvarez *et al.*, 2019) while the European automotive market accounts for about 13.8 million jobs, the United States 8 million jobs and Japan recorded over 5 million jobs (Statista, 2018). The automotive industry has been able to employ many people over the years due to these companies' commercial performance. Felton and Reinhart (2011) also reported a EUR13 billion increase in profits for the automotive industry in 2012, while it was EUR41 billion in 2007. Mehr *et al.* (2013) predicted that the automotive industry's profitability would reach EUR79 billion and sales of 100 million cars by 2020.

Based on global analysis and comparison in 2017 forecasted by The Global Automotive Outlook, the annual sale worldwide will reach 114 million cars by 2024. According to AlixPartner's analysis, the automobile industry will grow by 2.8% in the next seven years, eventually reaching 115 million units in 2024. North America, with 0.1% growth and Europe with 1.7% growth, is expected to have the lowest growth in the region while the highest growth belongs to Asia and South America with a 5.2% rate. Subsequently, South Asia, with 4.5% and South America, are forecast at 4.3%. The graphical representation of this development is shown in Figure 1.1.



Source: The Global Automotive Outlook (2017)

Figure 1.1 Automotive industry’s sales growth by geographic location

The positive growth pattern seen in automotive industries infers the significance of innovation within the automotive sector. The pivotal role of technological innovation enables firms to respond to a rapidly changing environment and engage in creative outputs (Baumgartner and Rauter, 2017; Sahoo, 2019). Innovativeness indeed seems to be a vital tool to gain a competitive advantage.

1.2.1 Iranian Automotive Industry

Iran has long been aware of the rich benefits of the automotive industry, and in order to enter this strategic economic and rapid development industry, in the 1960s, it invited Western companies producing the automotive industry to cooperate in local production. The Industrial Development and Renovation Organization of Iran (IDRO) noted that Iranian domestic car manufacturing companies such as SAIPA and Iran Khodro are essential in the Iranian economy. These companies have dominated the domestic car market since 2008, with 54% and 46%. (IDRO, 2008). Besides, with 4% of Iran's GDP and 12% of the country's labor force, Iran's automotive industry has a significant share in Iran's economic growth. (Kalbasi, 2018).

According to the International Organization of Motor Vehicle Manufacturers (OICA), Iran was the world's 13th largest carmaker in 2011 and has fallen five places to 18 in the past eight years (Table 1.1). Such a classification in the formation of the Iranian auto industry consists of two main parts: the original equipment manufacturer (OEM), which produces parts for car manufacturers, and the secondary market parts manufacturers. (Bagheri, 2015; Rojniruttikul, 2019).

Table 1.1 List of countries by motor vehicle production

	Country	2018	2017	2016	2015	2014	Peak Production	Peak Year
	World	95,634,593	97,302,534	95,057,929	90,780,583	89,747,430	97,302,534	2017
1	China	27,809,196	29,015,434	28,118,794	24,503,326	23,722,890	29,015,434	2017
2	United States	11,314,705	11,189,985	12,198,137	12,100,095	11,660,699	13,024,978	1999
3	Japan	9,728,528	9,693,746	9,204,590	9,278,321	9,774,558	13,486,796	1990
4	India	5,174,645	4,782,896	4,519,341	4,160,585	3,840,160	5,174,645	2018
5	Germany	5,120,409	5,645,581	5,746,808	6,033,164	5,907,548	6,213,460	2007
6	Mexico	4,100,525	4,068,415	3,600,365	3,565,469	3,365,306	4,100,525	2018
7	South Korea	4,028,834	4,114,913	4,228,509	4,555,957	4,524,932	4,657,094	2011
8	Brazil	2,879,809	2,699,672	2,156,356	2,429,463	3,364,890	3,712,380	2013
9	Spain	2,819,565	2,848,335	2,885,922	2,733,201	2,402,978	3,032,874	2000
10	France	2,270,000	2,227,000	2,082,000	1,972,000	1,817,000	3,919,776	1989
11	Thailand	2,167,694	1,988,823	1,944,417	1,915,420	1,880,007	2,457,057	2013
12	Canada	2,020,840	2,199,789	2,370,271	2,283,474	2,393,890	3,058,813	1999
13	Russia	1,767,674	1,551,293	1,303,989	1,384,399	1,886,646	2,233,103	2012
14	United Kingdom	1,604,328	1,749,385	1,816,622	1,682,156	1,598,879	2,332,376	1963
15	Turkey	1,550,150	1,695,731	1,485,927	1,358,796	1,170,445	1,695,731	2017

Table 1.1 List of countries by motor vehicle production (continued)

	Country	2018	2017	2016	2015	2014	Peak Production	Peak Year
16	Czech Republic	1,345,041	1,419,993	1,349,896	1,303,603	1,251,220	1,419,993	2017
17	Indonesia	1,343,714	1,216,615	1,177,389	1,098,780	1,298,523	1,343,714	2018
18	Iran	1,095,526	1,515,396	1,164,710	982,337	1,090,846	1,649,311	2011
19	Slovakia	1,090,000	1,001,520	1,040,000	1,035,503	993,000	1,090,000	2018
20	Italy	1,060,068	1,142,210	1,103,516	1,014,223	697,864	2,220,774	1989

Source: International Organization of Motor Vehicle Manufacturers (OICA, 2019)

The historical growth of Iran’s automotive industry has been phenomenal. Iran imported its first batch of Ford’s Model T during the 1930s and saw a growth of 10,000 units of import annually by 1955. The first local automotive assembly company was established in 1963 and named as Iran Khordo. Today, Iran Khordo and Saipa are two of the biggest name in Iran’s car manufacturing industry and control nearly 80% of the local market (Sabeti, 2017). Figure 1-2 and 1-3 depicts the number of vehicles (i.e. passenger and commercial) that were produced in Iran over the period 2009 to 2018 (OICA, 2019).

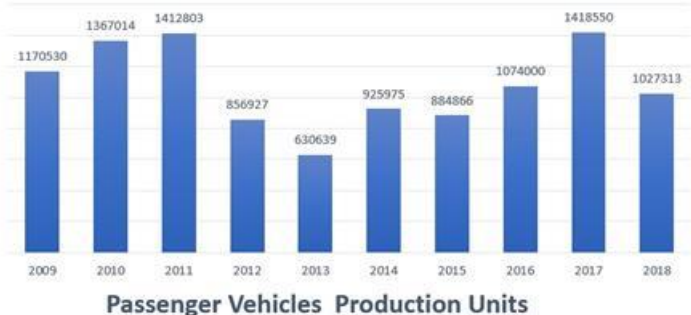


Figure 1.2 Passenger vehicles production units in Iran

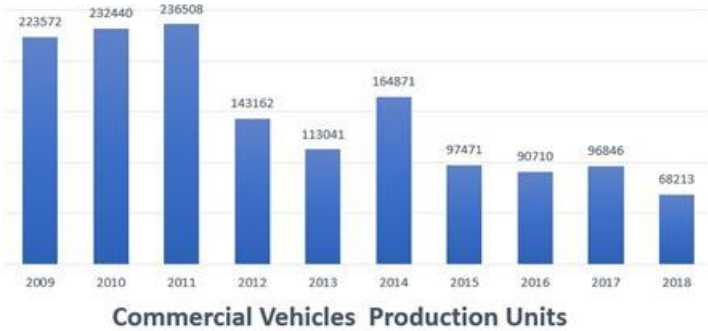


Figure 1.3 Commercial vehicle production in Iran

1.3 Problem Statement

The general issue is that effective and sustainable innovation is hard to accomplish for many organizations. In an increasingly competitive environment,

organizations have turned to innovation and build their interests in innovation projects, but the investment cost in these projects is typically high (Beckly *et al.*, 2012). While accomplishment in innovation may prompt more prominent incomes, benefits, market shares (Hult *et al.*, 2004; Woodside, 2005), mistakes can lead to costly or irreparable and unintended consequences (Cozijnsen *et al.*, 2000). It becomes crucial for an organization to make the capacity to innovate at a faster rate and a sustainable level (Lawson and Samson, 2001; Zaeh, 2013). Organizations are increasingly and significantly investing in R&D projects; nevertheless, studies have demonstrated that investment independently does not ensure the development of organizational innovation capability (Rosenbuch *et al.*, 2011).

Sustainability innovations play an important role in improving business sustainability (Belz, 2013), and even necessary (de Medeiros *et al.*, 2014; Gmelin and Seuring, 2014). For the development of successful innovations, numerous factors must mainly be used to provide new products (Hansen *et al.*, 2009; Laperche and Picard, 2013). The critical point is that organizational commitment to investing in innovation may not create significant results unless leaders know how external and internal factors influence an organization's innovation capability (Currall *et al.*, 2014; Drake *et al.*, 2006). Consistent with resource-based theory, intellectual capital and organizational culture as crucial issues for internal organizational innovation capability (de Castro *et al.*, 2010; Garcia *et al.*, 2013; Teece, 2011) along with external organizational innovation capability is ascendance organization performance, especially in organizations like automakers where innovation and respond to the diverse needs of customers is essential for the competition and survival. This study through concentrating on the internal and external factors of organization's innovation capability seeks to give another theoretical framework as a solution for issues such as lack of innovative products that was specified in the report of Iranians' parliament, governmental organizations, public officials, and the mass media for automakers firm of the country.

Iran's automobile manufacturing industry plays an essential role in the country's economy after oil, gas, and petrochemicals. However, due to old equipment and lack of efficient management in innovation, they cannot participate in global

markets, although Iran has natural resources, scientists, and experienced. Educated engineers have great potential for innovation growth, but due to the weakness of the national innovation system and organizational participation in innovation activities are weak and need to be strengthened, so managing and using various innovations is a big challenge in the company. Today's ones need a lot of training (Tatfi, 2011).

Iran had 13th rank of world auto manufacturer in 2013 and, within six years, dramatically drops to 18th ranking in the world (OICA, 2019). The official 2025 vision of Iran focuses on the automotive industry to produce 3 million units per year within ten years, next to reach fifth ranking in Asia and 11th ranking in the world as the same as before 2011. To achieving the above target, a strategic plan was developed by the Iranian ministry of the industry that focused on international collaboration and increased technological penetration.

Several experts and specialists in the automotive industry believe that Iranian people did not welcome Iranian automaker companies' products from 2011 to 2018 because Iranian automaker companies have not delivered innovative products to their customers. They mentioned that one of the most important reasons for this inability is the lack of attention to spiritual capital and human capital (Payday *et al.*, 2019). This lens's use is useful as the dynamics involved in the automotive industry may not be able to be captured by a static theoretical lens. The influence of changing resources within an organization should be conceptualized by a theory that presents a dynamic change in nature. This theory will provide the base to understand the influences of intellectual and cultural elements in shifting or pushing innovative boundaries in Iranian auto companies.

Iran also exports vehicles manufactured domestically to neighboring countries. Iran, for instance, exported cars (cars and parts) worth \$470 million in 2009. It then increased to \$ 520 million in 2012. In the following years, we saw a decrease in the value of exports, mainly due to the economic crisis caused by the currency's devaluation. In 2013, the value of exports fell to \$ 263 million and more to \$ 243 million in 2014 (ILIA, 2016) and, in 2019, dramatically dropped to \$ 36 million.

Besides, while Iran's domestic automakers, in collaboration with the government, are still in control of the domestic market, the low export potential remains an issue for Iran. One of the main factors limiting export potential, albeit the political and economic issues, is limited innovative capacity within this industry (Goudarzi, 2013); they can also not attend global markets due to outdated machinery and lack of efficient management in the field of innovation. Nevertheless, Iran has tremendous potential for innovation development, with its natural resources and skilled and trained scientists and engineers, but it has not been successful because of the lack of the national innovation program. The corporate sector's share of innovation operations is, however, small and should be increased. However, managing and using several technologies is a big obstacle in today's industries requiring adequate preparation. (Tatfi, 2011).

There is a lack of work on internal and external influences in developing auto-parts manufacturers' technological capabilities in the Republic of Iran. Restricted academic work has been undertaken to analyze and understand the roles of internal and external factors in pushing players in the Iranian automotive industry for innovative ability. Studies by Gassmann *et al.* (2010), Dilk *et al.* (2008), Ili *et al.* (2010), and Lazzarotti *et al.* (2013) reviewed the importance of innovation in Europe and other developed auto industries. Iran's auto industry's innovative capability has not been examined empirically as well. Such a review would provide insights into how auto part manufacturers in Iran could develop, especially by leveraging their internal and external factors, thereby achieving positive business results. These insights will enable Iranian car companies in particular and the government, in general, to develop mechanisms to accelerate market innovation and compete globally.

The impact of internal and external organizational innovation influences on organizational success through organizational innovation capacity in the Iranian automotive industry offers an incentive for a detailed study, owing to the above reasons.

1.4 Research Questions

In line with the stated research problems, the associated research questions of this study are:

- i. Is there any relationship between internal and external organizational innovation factors with innovation capability?
- ii. Is there any relationship between innovation capability and organizational performance?
- iii. Is the organizational innovation capability mediating the relationship between internal and external organization innovation factors and organizational performance?

1.5 Research Objectives

The objectives of this research are as follows:

- i. To identify the internal and external innovation factors that influence organizational innovation capability.
- ii. To determine the effects of innovation capability on organizational performance.
- iii. To examine the mediating effects of organizational innovation capability on the relationship between internal and external organization innovation factors and organizational performance.

1.6 Significance of the Study

This study and its findings are considered essential to provide insight into the consequences of internal and external organizational innovation factors on organizational performance directly and also through organizational innovation capability. In terms of the significance of this study, the organizational performance is one the most important of a successful organization and analyses the factors affected on it that are necessary, and it proposes to fill the gap in the body of knowledge by addressing these issues:

The first issue is linked to organizational innovation factors and their effect on organizational innovation capability and performance. Based on the reviewed literature, academics consistent with Cooper's (2005) approach bring more scholarly evidence about organizational innovation's external factors. Nevertheless, there is not a general census about internal factors of organizational innovation capabilities. In line with the resource-based theory, this study contributes to the body of knowledge by simultaneously introducing organizational culture and intellectual capital as organizations' internal factors.

The second issue is related to develop a new framework to emphasize the importance of internal and external factors of innovation on the innovation capabilities and organizational performance, even though previous researchers have reported the existence of a positive and significant relationship between organizational innovation capability and performance (Rhee *et al.* 2010; Sanz-Valle *et al.*, 2011, Chen *et al.*, 2015). So far, few studies have been conducted to examine organizational innovation factors' effect on organizational performance through organizational innovation capability. This study, in line with resource-based view theory and by incorporating internal and external organizational innovation factors, organizational innovation capability, and organizational performance, developed a new theoretical framework to provide a new solution to improve organizational performance through innovative activities.

The findings of this study provide some practical significance for managers. The first importance is related to improving the achievement of organizations and companies through innovation capabilities. This study provides a practical solution for business executives, policymakers, and especially those involved in the automotive industry.

The second importance is to operationalize innovation and its capabilities to improve companies' and organizations' performance. This research provides a framework with a comprehensive approach to identifying innovation factors and their components. Therefore, this research's findings may help business managers achieve a comprehensive knowledge about the various factors of organizational innovation and its components as a valuable resource of the organization.

1.7 Scope of the Study

The scope of the study was confined to the following parameters. First, the research was focused on auto part manufacturers in the Republic of Iran. This industry has been selected because of the permanent presence in the market, and its ability to compete depends more on innovation. Second, the quantitative research method was employed as the research design. Finally, the unit of analysis in this study was organizations and focused on senior executives of the participating companies as they will have adequate knowledge about their resources and innovative activities (Rich and Bateman, 2003).

1.8 Definition of Terms

This section provides a brief overview of key research terms. More details will be provided in the next chapter.

1.8.1 External Organizational Innovation Factors

The external organizational innovation refers to the external factors that motivate organizations to innovate, such as technology advances, increased globalization of markets, increased competitive pressure, shortening product life cycles, and changing customer needs (Cooper, 2005).

1.8.2 Internal Organizational Innovation Factor

The Internal organization innovations refers to the internal factors that motivate organizations to innovate like intellectual capital and organizational culture.

1.8.2.1 Intellectual Capital

The organization's resources include human skills, experience, collective knowledge, and any resources that can be of value to an organization (Marr and Schiuma, 2001). Also, all the intangible assets of organizations and companies that are not clearly recorded in the balance sheets and affect the performance, capabilities, and skills of organizations (Sardo *et al.*, 2018).

1.8.2.2 Organizational Culture

A set of beliefs, values, and inferences that groups and individuals use operationally in organizations (Lee and Kim, 2017; Stokes *et al.*, 2016).

1.8.3 Innovation Capability

Innovation capability is defined as applying knowledge, resources, and skills in new methods, products, marketing, managing organizations, and systems related to its rivals to increase firms' value and benefits for stakeholders (Hogan *et al.* 2011). Also, Availability of resources, collaborative structure, and process to solve problems (Laforet, 2011).

1.8.4 Performance

An organization's performance is reflected in the actual organization outputs and outcomes (Van Dooren *et al.*, 2015; Angiola *et al.*, 2018).

1.9 Organization of the Thesis

This thesis is organized in five chapters:

The first chapter includes an introduction to the study that explains the primary motivation for this research. Then the research questions are determined, and the objectives of this study are addressed. The problem statement is presented in this chapter. Also, after stating the study's scope and the significance of this study, a brief explanation of the variables and important terms is discussed.

The second chapter presents a review of the relevant literature. This chapter begins with an explanation and emphasis on the importance of innovation in the automotive industry. Besides, the organization's performance, definitions, and evaluation methods have been reviewed. Several theories related to this research have also been evaluated and examined. The essential factors of success in innovation and the relationship of these factors with the organization's performance through

innovation capability are discussed in the following. Finally, according to the models presented by previous researchers, the proposed model of this research is presented.

The third chapter describes the research method used in the study, which includes the research and design method used, the population and sampling method used, the research tool used as well as the variables studied, the experimental test performed, and the data collection method and performs reliability and validity tests.

Chapter 4 presents the findings of quantitative research. Analytical outcomes are showcased, including descriptive analysis, diagnostic analyses, and structural equation modeling results.

Chapter 5 provides conclusions and recommendations related to the study. In this chapter, the author reviews the findings, draws conclusions from the study, and offers several recommendations. The author will also make suggestions for further research. In the concluding section, appendices are included, which are tools and statements that allow authors to use research scales.

REFERENCES

- Abeyssekera, I. (2008). Intellectual capital disclosure trends: Singapore and Sri Lanka. *Journal of Intellectual Capital*, 9(4), 723-737.
- Adner, R. (2002). When are technologies disruptive? A demand-based view of the emergence of competition. *Strategic Management Journal*, 23(8), 667-688.
- Afsari, M., & Vasigh, H. J. (2017). Ranking the Creativity and Innovation Techniques Based on the Identifies Indicators in Iran's Automotive Industry. *Przedsiębiorstwo we współczesnej gospodarce-teoria i praktyka*, (4), 87-108.
- Akman, G. and Yilmaz, C. (2008). Innovative capability, innovation strategy and market orientation: an empirical analysis in Turkish software industry. *International Journal of Innovation Management*, 12(01), 69-111.
- Alexy, O., West, J., Klapper, H., & Reitzig, M. (2018). Surrendering control to gain advantage: Reconciling openness and the resource-based view of the firm. *Strategic Management Journal*, 39(6), 1704-1727.
- Alhiddi, A., Osborne, A. N., & Anyigor, K. T. (2019). Organizational culture and stakeholder success criteria in construction projects. *Periodica Polytechnica Architecture*, 50(2), 148-154.
- Ali Taha, V., Sirkova, M., & Ferencova, M. (2016). The impact of organizational culture on creativity and innovation. *Polish Journal of Management Studies*, 14.
- Alsharo, M., Gregg, D., & Ramirez, R. (2017). Virtual team effectiveness: The role of knowledge sharing and trust. *Information & Management*, 54(4), 479-490.
- Alvesson, M. (2012). *Understanding organizational culture*: Sage.
- Amit, R. and Schoemaker, P. J. (1993). Strategic assets and organizational rent. *Strategic management journal*, 14(1), 33-46.
- Amran, T. G., & Yose, M. J. (2018, March). Design logistics performance measurement model of automotive component industry for strengthening competitiveness of dealing AEC 2015. In *IOP Conference Series: Materials Science and Engineering* (Vol. 319, No. 1, p. 012024). IOP Publishing.
- Amrizah, K., & Nawal, K. (2013). The Relationship between Human Resource Management and Islamic Microfinance Providers' Performance: The Medi ating

- Role of Human Capital. *International Journal of Business and Social Science*, 4(16), 52-57.
- Andreeva, T. and Garanina, T. (2016), "Do all elements of intellectual capital matter for organizational performance? Evidence from Russian context", *Journal of Intellectual Capital*, Vol. 17 No. 2, pp. 397-412.
- Angiola, N., Bianchi, P. and Damato, L. (2018), "Performance management in public universities: overcoming bureaucracy", *International Journal of Productivity and Performance Management*, Vol. 67 No. 4, pp. 736-753.
- Anning-Dorson, T. (2018). Innovation and competitive advantage creation: The role of organisational leadership in service firms from emerging markets. *International Marketing Review*, 35(4), 580-600.
- Anzola-Román, P., Bayona-Sáez, C., & García-Marco, T. (2018). Organizational innovation, internal R&D and externally sourced innovation practices: Effects on technological innovation outcomes. *Journal of Business Research*, 91, 233-247.
- Aragón-Correa, J. A., García-Morales, V. J. and Cordón-Pozo, E. (2007). Leadership and organizational learning's role on innovation and performance: Lessons from Spain. *Industrial marketing management*, 36(3), 349-359.
- Armbruster, H., Bikfalvi, A., Kinkel, S. and Lay, G. (2008). Organizational innovation: The challenge of measuring non-technical innovation in large-scale surveys. *Technovation*, 28(10), 644-657.
- Arvanitis, S., Fuchs, B., & Woerter, M. (2015). Opening up the innovation process: outside-in involvement of innovative users and established firms' innovation performance. *International Journal of Innovation Management*, 19(02), 1550029.
- Ashton, R. H. (2005). Intellectual capital and value creation: a review. *Journal of accounting literature*, 24, 53.
- Asiaei, K., Jusoh, R., & Bontis, N. (2018). Intellectual capital and performance measurement systems in Iran. *Journal of Intellectual Capital*, 19(2), 294-320.
- Attar, M., Kang, K., & Sohaib, O. (2019, January). Knowledge Sharing Practices, Intellectual Capital and Organizational Performance. In *Proceedings of the 52nd Hawaii International Conference on System Sciences*.
- Augustyn, M. M., Elshaer, I. A., & Akamavi, R. K. (2019). Competing models of quality management and financial performance improvement. *The Service*

- Industries Journal, 1-29.
- Avgerou, C., & McGrath, K. (2007). Power, rationality, and the art of living through socio-technical change. *MIS quarterly*, 295-315.
- Azar, G., & Ciabuschi, F. (2017). Organizational innovation, technological innovation, and export performance: The effects of innovation radicalness and extensiveness. *International Business Review*, 26(2), 324-336.
- Aziz, N. N. A., & Samad, S. (2016). Innovation and competitive advantage: Moderating effects of firm age in foods manufacturing SMEs in Malaysia. *Procedia Economics and Finance*, 35(2016), 256-66.
- Bagheri, M. M. (2015). The Mediating Role of Supply Chain Integration and Agility on SMEs Performance (Doctoral dissertation, Universiti Teknologi Malaysia).
- Banister, P., Bunn, G., Burman, E. and Daniels, J. (2011). *Qualitative Methods In Psychology: A Research Guide: McGraw-Hill International. Management*, 5(1), 5-23.
- Barlow, J. (1999). From craft production to mass customisation. Innovation requirements for the UK housebuilding industry. *Housing Studies*, 14(1), 23-42.
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management Science*, 17(1), 99–120.
- Bartolacci, F., Castellano, N. G., & Cerqueti, R. (2015). The impact of innovation on companies' performance: An entropy-based analysis of the STAR market segment of the Italian Stock Exchange. *Technology Analysis & Strategic Management*, 27(1), 102-123.
- Batchimeg, B. (2017). Financial performance determinants of organizations: The case of Mongolian companies. *Journal of competitiveness*, 9(3), 22.
- Bates, R. and Khasawneh, S. (2005). Organizational learning culture, learning transfer climate and perceived innovation in Jordanian organizations. *International Journal of Training and Development*, 9(2), 96-109.
- Baumgartner, R. J., & Rauter, R. (2017). Strategic perspectives of corporate sustainability management to develop a sustainable organization. *Journal of Cleaner Production*, 140, 81-92.
- Bayburina, E., & Golovko, T. (2009). Design of Sustainable Development: Intellectual Value of Large BRIC Companies and Factors of their Growth. *Electronic Journal of Knowledge Management*, 7(5), 535-558.
- Bayo-Moriones, A., Galdon-Sanchez, J. E., & Martinez-de-Morentin, S. (2019).

- Performance appraisal: dimensions and determinants. *The International Journal of Human Resource Management*, 1-32.
- Belás, J., & Gabčová, L. (2016). The relationship among customer satisfaction, loyalty and financial performance of commercial banks. *Economics and Management*.
- Benner, M. J. and Tushman, M. L. (2003). Exploitation, exploration, and process management: The productivity dilemma revisited. *Academy of management review*, 28(2), 238-256.
- Bhardwaj, B. R. (2019). Influence of knowledge management on product innovation by intrapreneurial firms. *Global Knowledge, Memory and Communication*.
- Bititci, U., Cocca, P. and Ates, A. (2016), "Impact of visual performance management systems on the performance management practices of organisations", *International Journal of Production Research*, Vol. 54 No. 6, pp. 1571-1593.
- Blackler, F. 1995. Knowledge, knowledge work and organizations: An overview and interpretation. *Organ. Stud.* 16(6) 1021–1046.
- Boldrin, M., & Levine, D. K. (2008). Against intellectual monopoly.
- Bontis, N. (1998). Intellectual capital: an exploratory study that develops measures and models. *Management decision*, 36(2), 63-76.
- Bontis, N., Janošević, S. and Dženopoljac, V. (2015), "Intellectual capital in Serbia's hotel industry", *International Journal of Contemporary Hospitality Management*, Vol. 27 No. 6, pp. 1365-1384
- Borrego, M., Douglas, E. P. and Amelink, C. T. (2009). Quantitative, qualitative, and mixed research methods in engineering education. *Journal of Engineering Education*, 98(1), 53-66.
- Bottazzi, L. and Peri, G. (2003). Innovation and spillovers in regions: Evidence from European patent data. *European Economic Review*, 47(4), 687-710.
- Bouhlooli, N., & Mali, M. (2017). Evaluation the Intellectual Capitals in the Company's Financial Performance. *Journal of Humanities Insights*, 1(04), 200-206.
- Brem, A., Maier, M., & Wimschneider, C. (2016). Competitive advantage through innovation: the case of Nespresso. *European Journal of Innovation Management*, 19(1), 133-148.
- Bryman, A. (2012). *Social research methods*: OUP Oxford.
- Buganza, T., & Verganti, R. (2006). Life-cycle flexibility: how to measure and improve the innovative capability in turbulent environments. *Journal of Product*

- Innovation Management, 23(5), 393-407.
- Büschgens, T., Bausch, A., & Balkin, D. B. (2013). Organizational culture and innovation: A meta-analytic review. *Journal of product innovation management*, 30(4), 763-781.
- Butje, M. (2012). *Product marketing for technology companies*: Routledge.
- Cabrita, M. D. R., & Bontis, N. (2008). Intellectual capital and business performance in the Portuguese banking industry. *International Journal of Technology Management*, 43(1-3), 212-237.
- Çakar, N. D. and Ertürk, A. (2010). Comparing Innovation Capability of Small and Medium-Sized Enterprises: Examining the Effects of Organizational Culture and Empowerment. *Journal of Small Business Management*, 48(3), 325-359.
- Cameron, K. (2009). *An Introduction to the Competing Values Framework*: Haworth.
- Cameron, K. S., & Quinn, R. E. (2011). *Diagnosing and changing organizational culture: Based on the competing values framework*. John Wiley & Sons.
- Cameron, K. S., & Ettington, D. R. (1988). The conceptual foundations of organizational culture Higher education. *Handbook Theory Res*, 4, 429-447.
- Cameron, K. S., & Quinn, R. E. (1999). *Diagnosing and changing organisational culture*. Reading: Addison-Wesley.
- Camisón, C. and Villar-López, A. (2010). Effect of SMEs' international experience on foreign intensity and economic performance: The mediating role of internationally exploitable assets and competitive strategy. *Journal of Small Business Management*, 48(2), 116-151.
- Cenciarelli, V.G., Greco, G. and Allegrini, M. (2018), "Does intellectual capital help predict bankruptcy?", *Journal of Intellectual Capital*, Vol. 19 No. 2, pp. 321-337.
- Černe, M., Jaklič, M., Škerlavaj, M., Aydinlik, A. Ü., & Polat, D. D. (2012). Organizational learning culture and innovativeness in Turkish firms. *Journal of management & organization*, 18(2), 193-219.
- Chan, T. H., Bharadwaj, A., & Varadarajan, D. (2018). *Business Method Innovations and Firm Value: An Empirical Investigation*. Available at SSRN 3275005.
- Chang, S. (2008). International Business in Korea: The Evolution of the Market in the Globalization Era. *Pacific Affairs*, 81(3), 474-476.
- Chang, S. C., & Lee, M. S. (2007). A study on relationship among leadership, organizational culture, the operation of learning organization and employees' job satisfaction. *The learning organization*.

- Chatzoglou, P., & Chatzoudes, D. (2018). The role of innovation in building competitive advantages: an empirical investigation. *European Journal of Innovation Management*, 21(1), 44-69
- Chege, S. M., Wang, D., & Suntu, S. L. (2019). Impact of information technology innovation on firm performance in Kenya. *Information Technology for Development*, 1-30.
- Chen, H. H., Lee, A. H., & Chen, J. (2017). The relationship between innovation and performance in special nonprofit firms: Social and cooperative agrifood firms. *Journal of Management & Organization*, 23(4), 587-602.
- Chen, M. C., Cheng, S. J., & Hwang, Y. (2005). An empirical investigation of the relationship between intellectual capital and firms' market value and financial performance. *Journal of intellectual capital*, 6(2), 159-176.
- Chen, M.-H., Chang, Y.-Y., & Lee, C.-Y. (2015). Creative entrepreneurs' guanxi networks and success: Information and resource. *Journal of Business Research*, 68(4), 900-905.
- Chen, Y., Vanhaverbeke, W., & Du, J. (2016). The interaction between internal R & D and different types of external knowledge sourcing: an empirical study of Chinese innovative firms. *R&D Management*, 46(S3), 1006-1023.
- Chesbrough, H. and Rosenbloom, R. S. (2002). The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies. *Industrial and corporate change*, 11(3), 529-555.
- Chesbrough, H. W. (2006). *Open innovation: The new imperative for creating and profiting from technology*: Harvard Business Press.
- Chin, W. W. and Dibbern, J. (2010). An introduction to a permutation based procedure for multi-group PLS analysis: Results of tests of differences on simulated data and a cross cultural analysis of the sourcing of information system services between Germany and the USA *Handbook of partial least squares* (pp. 171-193): Springer.
- Chryssolouris, G., Papakostas, N. and Mourtzis, D. (2005). Refinery short-term scheduling with tank farm, inventory and distillation management: An integrated simulation-based approach. *European Journal of Operational Research*, 166(3), 812-827.
- Cleary, P., & Quinn, M. (2016). *Intellectual capital and business performance: An*

- exploratory study of the impact of cloud-based accounting and finance infrastructure. *Journal of Intellectual Capital*, 17(2), 255-278.
- Clegg, C. W., Icasati-Johanson, B. and Bennett, S. (2001). E-business: boom or gloom? *Behaviour & Information Technology*, 20(4), 293-298.
- Cogburn, D. L. and Levinson, N. S. (2003). US–Africa Virtual Collaboration in Globalization Studies: Success Factors for Complex, Cross-National Learning Teams. *International Studies Perspectives*, 4(1), 34-51.
- Cohen, W. M., & Levinthal, D. A. (2017). Absorptive capacity: a new perspective on learning and innovation [Internet]. 2016;[cited 2017 Nov 18].
- Collis, D. J. (1994). Research note: how valuable are organizational capabilities? *Strategic Management Journal*, 15(S1), 143-152.
- Comstock, D. E., & Scott, W. R. (1977). Technology and the structure of subunits: Distinguishing individual and workgroup effects. *Administrative Science Quarterly*, 177-202.
- Conybeare, J. A. (2004). *Merging traffic: the consolidation of the international automobile industry*: Rowman & Littlefield.
- Cooper, R. G. (2005). *Product leadership: Pathways to profitable innovation: Basic books*.
- Cozijnsen, A. J., Vrakking, W. J. and van IJzerloo, M. (2000). Success and failure of 50 innovation projects in Dutch companies. *European Journal of Innovation Management*, 3(3), 150-159.
- Craine, K. (2007). Managing the cycle of change. *Information Management*, 41(5), 44.
- Crespi, F., Mazzanti, M., & Managi, S. (2016). Green growth, eco-innovation and sustainable transitions.
- Crossan, M. M., & Apaydin, M. (2010). A multi-dimensional framework of organizational innovation: A systematic review of the literature. *Journal of management studies*, 47(6), 1154-1191.
- Cruz Alvarez, J., Blanco-Jiménez, M., & Guerra-Moya, S. (2019). Automotive Industry: Competitive Strategy and Challenges in the Pacific Alliance (Mexico, Chile, Colombia, and Peru). In *Regional Integration in Latin America: Dynamics of the Pacific Alliance* (pp. 29-43). Emerald Publishing Limited
- Curado, C. and Bontis, N. (2007). Managing intellectual capital: the MIC matrix. *International journal of knowledge and learning*, 3(2-3), 316-328.
- Currall, S. C., Frauenheim, E., Perry, S. J. and Hunter, E. M. (2014). *Organized*

- Innovation: A Blueprint for Renewing America's Prosperity: OUP USA.
- Curran, J., Gaber, I., & Petley, J. (2018). *Culture wars: The media and the British left*. Routledge.
- Daft, R. L. (2009). *Organization theory and design* (p. 17). South-Western Pub.
- Damanpour, F. (2010). An integration of research findings of effects of firm size and market competition on product and process innovations. *British Journal of Management*, 21(4), 996-1010.
- Damanpour, F. (2014). Footnotes to research on management innovation. *Organization Studies*, 35(9), 1265-1285.
- Damanpour, F. (2017). Organizational innovation. In *Oxford Research Encyclopedia of Business and Management*.
- Datta, A., Mukherjee, D., & Jessup, L. (2015). Understanding commercialization of technological innovation: taking stock and moving forward. *R&D Management*, 45(3), 215-249.
- Davarnia, V. & Abdi, B. 2016, An Analysis of Open Innovation in the Iranian Automotive Industry; With the risk management approach, the Second International Conference on Entrepreneurship, Creativity and Innovation
- De Kluyver, C., & Pearce, J. A. (2015). *Strategic management: an executive perspective*. Business Expert Press.
- De Medeiros, J. F., Ribeiro, J. L. D., & Cortimiglia, M. N. (2014). Success factors for environmentally sustainable product innovation: a systematic literature review. *Journal of Cleaner Production*, 65, 76-86.
- Deal, T. E. and Kennedy, A. A. (2000). *Corporate cultures: The rites and rituals of corporate life*: Da Capo Press.
- Debenham, J. and Wilkinson, I. (2006). Exploitation versus exploration in market competition. *Industry and Innovation*, 13(3), 263-289.
- Deeds, D. L. and Decarolis, D. M. (1999). The impact of stocks and flows of organizational knowledge on firm performance: An empirical investigation of the biotechnology industry. *Strategic management journal*.
- DeGroot, S. E. (2011). An Empirical Investigation of the Impact of Information Technology on Supply Chain Agility and Firm Performance Among U.S. Manufacturers.
- Del Canto, J. G., & Gonzalez, I. S. (1999). A resource-based analysis of the factors determining a firm's R&D activities. *Research Policy*, 28(8), 891-905.

- Demircioglu, M. A. (2016). Organizational innovation. *Global Encyclopedia of Public Administration, Public Policy, and Governance*, 1-5.
- Dilk, C., Gleich, R., Wald, A., & Motwani, J. (2008). State and development of innovation networks: Evidence from the European vehicle sector. *Management decision*, 46(5), 691-701.
- Ding, Y., & Li, G. (2010). Study on the management of intellectual capital. *International Journal of business and Management*, 5(2), 213.
- Dobbs, R., Karakolev, T. and Raj, R. (2007). Preparing for the next downturn. *McKinsey Quarterly*, 3, 81.
- Dobni, C. B. (2008). Measuring innovation culture in organizations: The development of a generalized innovation culture construct using exploratory factor analysis. *European Journal of Innovation Management*, 11(4), 539-559.
- Dogramaci, A. and Adam, N. R. (2012). *Aggregate and Industry-Level Productivity Analyses: Springer Netherlands*.
- Drake, M. P., Sakkab, N. and Jonash, R. (2006). Maximizing return on innovation investment. *Research-Technology Management*, 49(6), 32-41.
- Dumay, J., & Rooney, J. (2018). Overcoming the symbolic violence of orthodox accounting practice: an intellectual capital perspective. *Journal of Intellectual Capital*, 19(2), 248-271.
- Dundon, E. (2002). *The Seeds of Innovation: Cultivating the Synergy that Fosters New Ideas: AMACOM*.
- Duygulu, E., Ozeren, E., İşildar, P. and Appolloni, A. (2016), “The Sustainable strategy for small and medium sized enterprises: the relationship between mission statements and performance”, *Sustainability*, Vol. 8 No. 7, pp. 698-714.
- Edvinsson, L., & Malone, M. (1997). Realizing your company’s true value by finding its hidden brain power. *Intellectual Capital*.
- Edwards, P., Sen Gupta, S. and Tsai, C.-J. (2007). Developing the resources of the firm: strategy and the external environment of small firms in the UK: Working Paper.
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: what are they? *Strategic management journal*, 21(10-11), 1105-1121.
- El Mola, K. G., & Parsaei, H. (2010, July). Dimensions and measures of manufacturing performance measurement. In *The 40th International Conference on Computers & Industrial Engineering* (pp. 1-6). IEEE.

- Elmquist, M., & Le Masson, P. (2009). The value of a 'failed'R&D project: an emerging evaluation framework for building innovative capabilities 1. *R&d Management*, 39(2), 136-152.
- Ettabaa, R., Bouami, D., & Elfezazi, S. (2019, March). Open Innovation in the Automotive Industry. In 2019 8th International Conference on Industrial Technology and Management (ICITM) (pp. 115-121). IEEE
- Evans, S., Vladimirova, D., Holgado, M., Van Fossen, K., Yang, M., Silva, E. A., & Barlow, C. Y. (2017). Business model innovation for sustainability: Towards a unified perspective for creation of sustainable business models. *Business Strategy and the Environment*, 26(5), 597-608.
- Felton, A., & Reinhart, C. (2011). The First Global Financial Crisis of the 21st Century Part II: June–December, 2008. Centre for Economic Policy Research.
- Feng, G. F., Zheng, M., Wen, J., Chang, C. P., & Chen, Y. E. (2019). The assessment of globalization on innovation in Chinese manufacturing firms. *Structural Change and Economic Dynamics*, 50, 190-202.
- Feng, H., Morgan, N. A., & Rego, L. L. (2017). Firm capabilities and growth: the moderating role of market conditions. *Journal of the Academy of Marketing Science*, 45(1), 76-92.
- Ferreira, A. I. (2013). Competing Values Framework and its impact on the intellectual capital dimensions: evidence from different Portuguese organizational sectors. *Knowledge Management Research & Practice*.
- Firer, S. and Mitchell Williams, S. (2003). Intellectual capital and traditional measures of corporate performance. *Journal of intellectual capital*, 4(3), 348-360.
- Flichy, P. (2008). *Understanding technological innovation: a socio-technical approach*: Edward Elgar Publishing.
- Fornell, C., & Bookstein, F. L. (1982). Two structural equation models: LISREL and PLS applied to consumer exit-voice theory. *Journal of Marketing research*, 440-452.
- Francis, D. and Bessant, J. (2005). Targeting innovation and implications for capability development. *Technovation*, 25(3), 171-183.
- Freiling, J., & Fichtner, H. (2010). Organizational culture as the glue between people and organization: A competence-based view on learning and competence building. *German Journal of Human Resource Management*, 24(2), 152-172.
- Gallagher, S., Brown, C. and Brown, L. (2008). A strong market culture drives

- organizational performance and success. *Employment Relations Today*, 35(1), 25-31.
- Garcia, L., Rodriguez-Castellanos, A. and Barrutia-Guenaga, J. (2013). *Proceedings of the 5th European Conference on Intellectual Capital: ECIC 2013*: Academic Conferences and Publishing Limited
- Gartenberg, C., Prat, A., & Serafeim, G. (2019). Corporate purpose and financial performance. *Organization Science*, 30(1), 1-18.
- Gassmann, O., Enkel, E., & Chesbrough, H. (2010). The future of open innovation. *R&d Management*, 40(3), 213-221
- Gaylard, M., Sutherland, M. and Viedge, C. (2005). The factors perceived to influence the retention of information technology workers. *South African Journal of Business Management*, 36(3).
- Gefen, D., Straub, D., & Boudreau, M. C. (2000). Structural equation modeling and regression: Guidelines for research practice. *Communications of the association for information systems*, 4(1), 7.
- Gibson, A. J. (2018). Copresence, Communication Medium, and Solidarity in Task Groups (Doctoral dissertation, Kent State University).
- Ginesti, G., Caldarelli, A. and Zampella, A. (2018), “Exploring the impact of intellectual capital on company reputation and performance”, *Journal of Intellectual Capital*, Vol. 19 No. 5, pp. 915-934.
- Gmelin, H., & Seuring, S. (2014). Determinants of a sustainable new product development. *Journal of Cleaner production*, 69, 1-9.
- Gogan, L., Artene, A., Sarca, I. and Draghici, A. (2016), “The impact of intellectual capital on organizational performance”, *Procedia – Social and Behavioral Sciences*, Vol. 221, pp. 194-202.
- Golikova, V., & Kuznetsov, B. (2016). The role of innovation and globalization strategies in post-crisis recovery. *Higher School of Economics Research Paper No. WP BRP*, 123.
- Goromonzi, W. O. (2016). Organizational culture, strategy implementation and commercial bank performance in Zimbabwe. *International Review of Management and Marketing*, 6(2), 307-316.
- Götz, O., Liehr-Gobbers, K., & Krafft, M. (2010). Evaluation of structural equation models using the partial least squares (PLS) approach. In *Handbook of partial least squares* (pp. 691-711). Springer, Berlin, Heidelberg.

- Goudarzi , H. (2013). The history of the automotive industry: the Automobile Association released after sales service companies.
- Gouveia, V. A. L., Silva, T. G., Szuster, N., & Szuster, F. (2018). Disclosure in view of companies' increasing intangibility: Book Value x Market Value. *Revista de Educação e Pesquisa em Contabilidade*, 12(4).
- Grasenick, K. and Low, J. (2004). Shaken, not stirred: defining and connecting indicators for the measurement and valuation of intangibles. *Journal of intellectual capital*, 5(2), 268-281.
- Gratton, L. and Erickson, T. J. (2007). Eight ways to build collaborative teams. *Harvard business review*, 85(11), 100.
- Griffin, A. S., & Guez, D. (2014). Innovation and problem solving: a review of common mechanisms. *Behavioural Processes*, 109, 121-134.
- Grimpe, C., Sofka, W., Bhargava, M., & Chatterjee, R. (2017). R&D, marketing innovation, and new product performance: a mixed methods study. *Journal of Product Innovation Management*, 34(3), 360-383.
- Groover, M. P. (2007). *Automation, production systems, and computer-integrated manufacturing*: Prentice Hall Press.
- Guiso, L., Sapienza, P., & Zingales, L. (2015). Corporate culture, societal culture, and institutions. *American Economic Review*, 105(5), 336-39.
- Guo, Y., & Zheng, G. (2019). How do firms upgrade capabilities for systemic catch-up in the open innovation context? A multiple-case study of three leading home appliance companies in China. *Technological Forecasting and Social Change*, 144, 36-48.
- Gupta, S., Czinkota, M., & Ozdemir, S. (2019). Innovation in Sustainability Initiatives through Reverse Channels. *Journal of Business-to-Business Marketing*, 26(3-4), 233-243.
- Haines, J. D. and Sharif, N. M. (2006). A framework for managing the sophistication of the components of technology for global competition. *Competitiveness Review: An International Business Journal*, 16(2), 106-121.
- Hair, J. F. (2009). *Multivariate data analysis*.
- Hair, J. F., Sarstedt, M., Ringle, C. M. and Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, 40(3), 414-433.
- Hair, J. F., Wolfinbarger, M. F., Ortinau, D. J. and Bush, R. P. (2008). *Essentials of*

- marketing research: McGraw-Hill Irwin.
- Halawi, L., Aronson, J. and McCarthy, R. (2005). Resource-based view of knowledge management for competitive advantage. *The electronic journal of knowledge management*, 3(2), 75-86.
- Hambrick, D. C. (2007). Upper echelons theory: An update. *Academy of management review*, 32(2), 334-343.
- Hambrick, D. C. and Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of management review*, 9(2), 193-206.
- Hamel, G. and Prahalad, C. K. (2013). *Competing for the Future*: Harvard Business Press.
- Han, Y., & Li, D. (2015). Effects of intellectual capital on innovative performance. *Management Decision*.
- Hanafizadeh, P., Hosseinioun, S. S., & Khedmatgozar, H. R. (2015). Financial valuation of a business model as an intangible asset. *International Journal of E-Business Research (IJEER)*, 11(4), 17-31.
- Hang Chan, K. (2009). Impact of intellectual capital on organisational performance: an empirical study of companies in the Hang Seng Index (Part 1). *The Learning Organization*, 16(1), 4-21.
- Hansen, M. T., Mors, M. L. and Løvås, B. (2005). Knowledge sharing in organizations: Multiple networks, multiple phases. *Academy of Management Journal*, 48(5), 776-793.
- Hartmann, A. (2006). The role of organizational culture in motivating innovative behaviour in construction firms. *Construction innovation*, 6(3), 159-172.
- Hasan, I., Kobeissi, N., Liu, L., & Wang, H. (2018). Corporate social responsibility and firm financial performance: The mediating role of productivity. *Journal of Business Ethics*, 149(3), 671-688.
- Hashi, I. and Stojčić, N. (2013). The impact of innovation activities on firm performance using a multi-stage model: Evidence from the Community Innovation Survey 4. *Research Policy*, 42(2), 353-366.
- Hasiholan, A. R., & Verico, K. (2019, May). Globalization in automotive industry: Can Indonesia catch-up with Thailand? In *Business Innovation and Development in Emerging Economies: Proceedings of the 5th Sebelas Maret International Conference on Business, Economics and Social Sciences (SMICBES 2018), July 17-19, 2018, Bali, Indonesia* (p. 344). CRC Press.

- Hashim, M. J., Osman, I., & Alhabshi, S. M. (2015). Effect of intellectual capital on organizational performance. *Procedia-Social and Behavioral Sciences*, 211, 207-214.
- Helfat, C. E., & Peteraf, M. A. (2003). The dynamic resource-based view: Capability lifecycles. *Strategic management journal*, 24(10), 997-1010.
- Hellström, A., Nilsson, S., Andersson, M., & Håkanson, U. (2019). Intellectual property for generating value for start-up companies in key enabling technologies. *Biotechnology Research and Innovation*, 3(1), 80-90.
- Henderson, J. C., & Lee, S. (1992). Managing I/S design teams: a control theories perspective. *Management science*, 38(6), 757-777.
- Henseler, J. (2015). Testing measurement invariance of composites using partial least squares. University of Newcastle.
- Henseler, J., & Fassott, G. (2010). Testing moderating effects in PLS path models: An illustration of available procedures. In *Handbook of partial least squares* (pp. 713-735). Springer, Berlin, Heidelberg.
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In *New challenges to international marketing*. Emerald Group Publishing Limited.
- Hillebrand, B., & Biemans, W. G. (2004). Links between internal and external cooperation in product development: an exploratory study. *Journal of Product innovation management*, 21(2), 110-122.
- Hislop, D., Bosua, R., & Helms, R. (2018). *Knowledge management in organizations: A critical introduction*. Oxford University Press.
- Hitt, M. A., Biermant, L., Shimizu, K. and Kochhar, R. (2001). Direct and moderating effects of human capital on strategy and performance in professional service firms: A resource-based perspective. *Academy of Management journal*, 44(1), 13-28.
- Hogan, S. J., Soutar, G. N., McColl-Kennedy, J. R., & Sweeney, J. C. (2011). Reconceptualizing professional service firm innovation capability: Scale development. *Industrial Marketing Management*, 40(8), 1264-1273.
- Hokkanen, K. (2006). *R&D Expenditures and Firm Performance: Empirical Evidence on Finnish Data*.
- Hornig, J. S., Liu, C. H. S., Chou, S. F., Tsai, C. Y., & Hu, D. C. (2018). Developing a sustainable service innovation framework for the hospitality

- industry. *International journal of contemporary hospitality management*, 30(1), 455-474.
- Hourneaux Jr, F., Carneiro-da-Cunha, J. A., & Corrêa, H. L. (2017). Performance measurement and management systems. *Managerial Auditing Journal*.
- Huizingh, E. K. (2011). Open innovation: State of the art and future perspectives. *Technovation*, 31(1), 2-9.
- Hult, G. T. M., Hurley, R. F. and Knight, G. A. (2004). Innovativeness: its antecedents and impact on business performance. *Industrial marketing management*, 33(5), 429-438.
- Hundley, R., Anderson, R. H., Bikson, T. K. and Neu, C. R. (2003). *The global course of the information revolution: recurring themes and regional variations*: Rand Corporation.
- Hussinki, H., Ritala, P., Vanhala, M., & Kianto, A. (2017). Intellectual capital, knowledge management practices and firm performance. *Journal of Intellectual Capital*, 18(4), 904-922.
- Ili, S., Albers, A., & Miller, S. (2010). Open innovation in the automotive industry. *R&d Management*, 40(3), 246-255.
- Inigo, E. A., Albareda, L., & Ritala, P. (2017). Business model innovation for sustainability: Exploring evolutionary and radical approaches through dynamic capabilities. *Industry and Innovation*, 24(5), 515-542.
- Inkinen, H. (2015). Review of empirical research on intellectual capital and firm performance. *Journal of Intellectual capital*.
- Inkinen, H., Kianto, A., Vanhala, M., & Ritala, P. (2017). Structure of intellectual capital—an international comparison. *Accounting, Auditing & Accountability Journal*, 30(5), 1160-1183.
- Iran Automobile Industry Growth, Statistics, Industry Forecast 2019-2024. (2019). Retrieved January 18, 2020, from Mordorintelligence.com website: <https://www.mordorintelligence.com/industry-reports/analysis-of-automobile-industry-in-iran>
- Isaac, V. R., Borini, F. M., Raziq, M. M., & Benito, G. R. (2019). From local to global innovation: The role of subsidiaries' external relational embeddedness in an emerging market. *International Business Review*, 28(4), 638-646.
- Jamrog, J., Vickers, M. and Bear, D. (2006). Building and sustaining a culture that supports innovation. *Human Resource Planning*, 29(3), 9.

- Jarrar, Y., Schiuma, G., Martensen, A., Dahlgaard, J. J., Mi Park-Dahlgaard, S. and Grønholdt, L. (2007). Measuring and diagnosing innovation excellence—simple contra advanced approaches: a Danish study. *Measuring business excellence*, 11(4), 51-65.
- Jaskyte, K. (2013). Does size really matter? Organizational size and innovations in nonprofit organizations. *Nonprofit management and leadership*, 24(2), 229-247
- Jiménez-Jiménez, D., & Sanz-Valle, R. (2011). Innovation, organizational learning, and performance. *Journal of business research*, 64(4), 408-417.
- Jordão, R. V. D., & C. (2017). Knowledge management and intellectual capital in networks of small-and medium-sized enterprises. *Journal of Intellectual Capital*, 18(3), 667-692.
- Jung, D. I., Chow, C. and Wu, A. (2003). The role of transformational leadership in enhancing organizational innovation: Hypotheses and some preliminary findings. *The Leadership Quarterly*, 14(4), 525-544.
- Kaasa, A. and Vadi, M. (2010). How does culture contribute to innovation? Evidence from European countries. *Economics of Innovation and New Technology*, 19(7), 583-604.
- Kafetzopoulos, D. and Psomas, E. (2015). The impact of innovation capability on the performance of manufacturing companies: The Greek case. *Journal of Manufacturing Technology Management*, 26(1), 104-130.
- Kajalo, S., Rajala, A., & Tuominen, M. (2016). The impact of market-based assets on innovativeness and business performance. *International Journal of Business Innovation and Research*, 11(4), 584-596.
- Kalkan, A., Bozkurt, Ö. Ç., & Arman, M. (2014). The impacts of intellectual capital, innovation and organizational strategy on firm performance. *Procedia-Social and Behavioral Sciences*, 150, 700-707.
- Kallio, A., Kujansivu, P., & Parjanen, S. (2012). Locating the Weak Points of Innovation Capability before Launching a Development Project. *Interdisciplinary Journal of Information, Knowledge & Management*, 7.
- Kaloudis, A. and Pedersen, T. E. (2008). Sectoral innovation systems in Europe: Monitoring, analysing trends and identifying challenges. *The Energy Sector-Final report, Rapport*, 32, 2008.
- Kazadi, K., Lievens, A., & Mahr, D. (2016). Stakeholder co-creation during the innovation process: Identifying capabilities for knowledge creation among multiple stakeholders. *Journal of business research*, 69(2), 525-540.

- Keiningham, T., Aksoy, L., Bruce, H. L., Cadet, F., Clennell, N., Hodgkinson, I. R., & Kearney, T. (2019). Customer experience driven business model innovation. *Journal of Business Research*.
- Kellermanns, F., Walter, J., Crook, T. R., Kemmerer, B., & Narayanan, V. (2016). The resource-based view in entrepreneurship: A content-analytical comparison of researchers' and entrepreneurs' views. *Journal of Small Business Management*, 54(1), 26-48.
- Kensen, A. K., Pretorius, J. H., & Pretorius, L. (2014). Towards the sixth generation of R&D management: an exploratory study. *International Conference for the International Association of Management of Technology*.
- Khanmirzaee, S., Jafari, M., & Akhavan, P. (2018). A study on the role of science and technology parks in development of knowledge-based economy. *World Journal of Entrepreneurship, Management and Sustainable Development*, 14(1), 74-85.
- Khorshid, s., & Nojavan, s. (2013). Competitiveness and selecting a competitive strategy based on porter's competitive forces model, fuzzy ahp and dea.
- Kim, W. C., & Mauborgne, R. (2004). Value innovation-The strategic logic of high growth. *Harvard Business Review*, 82(7-8), 172-+.
- Kindström, D., Kowalkowski, C., & Sandberg, E. (2013). Enabling service innovation: A dynamic capabilities approach. *Journal of business research*, 66(8), 1063-1073.
- Kirby, J. (2005). Toward a theory of high performance. *Harvard Business Review*, 83(7), 30.
- Knoke, D. (2018). *Changing organizations: Business networks in the new political economy*. Routledge.
- Kor, Y. Y., & Mesko, A. (2013). Dynamic managerial capabilities: Configuration and orchestration of top executives' capabilities and the firm's dominant logic. *Strategic management journal*, 34(2), 233-244.
- Kotter, J. P. (2008). *Corporate culture and performance*: SimonandSchuster. com.
[kpmg/pl/en/home/insights/2018/03/r-and-d-in-the-automotive-sector.html](https://www.kpmg/pl/en/home/insights/2018/03/r-and-d-in-the-automotive-sector.html)
- Laforet, S. (2011). A framework of organisational innovation and outcomes in SMEs. *International Journal of Entrepreneurial Behavior & Research*, 17(4), 380-408.
- Lam, S. Y., Shankar, V., Erramilli, M. K. and Murthy, B. (2004). Customer value, satisfaction, loyalty, and switching costs: an illustration from a business-to-business service context. *Journal of the academy of marketing science*, 32(3),

293-311.

- Laperche, B., & Picard, F. (2013). Environmental constraints, Product-Service Systems development and impacts on innovation management: learning from manufacturing firms in the French context. *Journal of Cleaner Production*, 53, 118-12
- Lassen, A. H., & Laugen, B. T. (2017). Open innovation: on the influence of internal and external collaboration on degree of newness. *Business Process Management Journal*, 23(6), 1129-1143
- Lau, C. M. and Ngo, H. Y. (2004). The HR system, organizational culture, and product innovation. *International business review*, 13(6), 685-703.
- Lawson, B. and Samson, D. (2001). Developing innovation capability in organisations: a dynamic capabilities approach. *International journal of innovation management*, 5(03), 377-400.
- Lazzarotti, V., Manzini, R., Pellegrini, L., & Pizzurno, E. (2013). Open Innovation in the automotive industry: Why and How? Evidence from a multiple case study. *International Journal of Technology Intelligence and Planning*, 9(1), 37-56.
- Lee, C. Y., Lee, J. H., & Gaur, A. S. (2017). Are large business groups conducive to industry innovation? The moderating role of technological appropriability. *Asia Pacific Journal of Management*, 34(2), 313-337.
- Lee, C., Lee, K. and Pennings, J. M. (2001). Internal capabilities, external networks, and performance: A study on technology-based ventures. *Strategic management journal*, 22(6-7), 615-640.
- Lee, M., & Kim, H. (2017). Exploring the organizational culture's moderating role of effects of Corporate Social Responsibility (CSR) on firm performance: Focused on corporate contributions in Korea. *Sustainability*, 9(10), 1883.
- Lee, R., Lee, J. H., & Garrett, T. C. (2019). Synergy effects of innovation on firm performance. *Journal of Business Research*, 99, 507-515.
- Lee, Y. H., & Seo, Y. W. (2018). Strategies for sustainable business development: utilizing consulting and innovation activities. *Sustainability*, 10(11), 4122.
- Lee, Y. T. (2012). Global leadership in multicultural teams. In *Leadership Development in a Global World* (pp. 188-213). Palgrave Macmillan, London.
- Leiponen, A. (2000). Competencies, innovation and profitability of firms. *Economics of innovation and new technology*, 9(1), 1-24.

- Lendel, V., & Varmus, M. (2014). Evaluation of the innovative business performance. *Procedia-Social and Behavioral Sciences*, 129, 504-511.
- Leonard-Barton, D. (1998). *Wellsprings of knowledge: Building and sustaining the sources of innovation*: Harvard Business Press.
- Leung, A. K.-y., Maddux, W. W., Galinsky, A. D. and Chiu, C.-y. (2008). Multicultural experience enhances creativity: the when and how. *American Psychologist*, 63(3), 169.
- Lichtenthaler, U. (2011). Open innovation: Past research, current debates, and future directions. *Academy of management perspectives*, 25(1), 75-93.
- Lichtenthaler, U., & Lichtenthaler, E. (2009). A capability-based framework for open innovation: Complementing absorptive capacity. *Journal of management studies*, 46(8), 1315-1338.
- Li-Hua, R., & Lu, L. (2013). Technology strategy and sustainability of business: Empirical experiences from Chinese cases. *Journal of Technology Management in China*, 8(2), 62-82.
- Lim, B. (1995). Examining the organizational culture and organizational performance link. *Leadership & Organization Development Journal*, 16(5), 16-21.
- Lim, S. C., Macias, A. J., & Moeller, T. (2019). Intangible assets and capital structure. Available at SSRN 2514551.
- Lönnqvist, A. (2004). Measurement of intangible success factors: case studies on the design, implementation and use of measures. Tampere University of Technology.
- Lööf, H., & Heshmati, A. (2006). On the relationship between innovation and performance: A sensitivity analysis. *Economics of Innovation and New Technology*, 15(4-5), 317-344.
- López-Iturriaga, F. J., & Rodríguez-Sanz, J. A. (2008). Capital structure and institutional setting: a decompositional and international analysis. *Applied Economics*, 40(14), 1851
- Lorentzen, J. and Barnes, J. (2004). Learning, upgrading, and innovation in the South African automotive industry. *The European Journal of Development Research*, 16(3), 465-498.
- Louis, Y. C. (2004). The R & D and marketing cooperation across new product development stage: an empirical study of Taiwan IT industry. *Journal of industrial marketing management*, 33(7), 593-605.

- Lüke, K. H., Walther, J., Wäldchen, D., & Royer, D. (2019, June). Innovation Management Methods in the Automotive Industry. In International Conference on Innovations for Community Services (pp. 125-141). Springer, Cham.
- Maestrini, V., Luzzini, D., Caniato, F., Maccarrone, P., & Ronchi, S. (2018). The impact of supplier performance measurement systems on supplier performance. *International Journal of Operations & Production Management*.
- Mahdavi Mazdeh, M., Jafari, M., Akhavan, P., & Mousavi, S. J. (2016). Improving product development performance through knowledge outsourcing: a study of the automotive industry in Iran. *South African Journal of Industrial Engineering*, 27(2), 120-131.
- Mahmoudsalehi, M., Feizi, K., Taqhavifard, M. T., & Vanani, I. R. (2019). Is information technology valuable for automotive production industries? An empirical insight from Iranian automotive industries. , 10(2), 107-122. *International Journal of Value Chain Management*
- Mahut, F., Daaboul, J., Bricogne, M., & Eynard, B. (2017). Product-Service Systems for servitization of the automotive industry: a literature review. *International Journal of Production Research*, 55(7), 2102-2120.
- Makadok, R. (2001). Toward a synthesis of the resource-based and dynamic-capability views of rent creation. *Strategic management journal*, 22(5), 387-401.
- Malerba, F., Nelson, R., Orsenigo, L. and Winter, S. (2007). Demand, innovation, and the dynamics of market structure: The role of experimental users and diverse preferences. *Journal of Evolutionary Economics*, 17(4), 371-399.
- Mankin, E. (2007). New products start by viewing future. *Research-Technology Management*, 50(3), 5.
- Maradana, R. P., Pradhan, R. P., Dash, S., Gaurav, K., Jayakumar, M., & Chatterjee, D. (2017). Does innovation promote economic growth? Evidence from European countries. *Journal of Innovation and Entrepreneurship*, 6(1), 1.
- Marginson, S. (2017), "Limitations of human capital theory", *Studies in Higher Education*, Vol. 44 No. 2, pp. 287-301, available at: www.tandfonline.com/doi/abs/10.1080/03075079.2017.1359823
- Mariz-Pérez, R. M., Teijeiro-Alvarez, M. M., & García-Alvarez, M. T. (2012). The relevance of human capital as a driver for innovation. *Cuadernos de economía*.
- Marr, B., & Schiuma, G. (2001). Measuring and managing intellectual capital and knowledge assets in new economy organisations. *Handbook of performance*

measurement, Gee, London, 369-411.

- Martín de Castro, G. and López Sáez, P. (2008). Intellectual capital in high-tech firms: The case of Spain. *Journal of Intellectual Capital*, 9(1), 25-36.
- Martín-de Castro, G., Delgado-Verde, M., Navas-López, J. E., & Cruz-González, J. (2013). The moderating role of innovation culture in the relationship between knowledge assets and product innovation. *Technological Forecasting and Social Change*, 80(2), 351-363.
- Martinez-Roman, J. A., Gamero, J. and Tamayo, J. A. (2011). Analysis of innovation in SMEs using an innovative capability-based non-linear model: A study in the province of Seville (Spain). *Technovation*, 31(9), 459-475.
- Maskell, B. H. (2013). *Performance measurement for world class manufacturing: A model for American companies*. Productivity press.
- Mauerhoefer, T., Strese, S., & Brettel, M. (2017). The impact of information technology on new product development performance. *Journal of Product Innovation Management*, 34(6), 719-738.
- Mavridis, D. G. (2004). The intellectual capital performance of the Japanese banking sector. *Journal of Intellectual Capital*, 5(1), 92-115.
- McAlearney, A. S., Walker, D. M., & Hefner, J. L. (2018). Moving Organizational Culture from Volume to Value: A Qualitative Analysis of Private Sector Accountable Care Organization Development. *Health services research*, 53(6), 4767-4788.
- McDowell, W.C., Peake, W.O., Coder, L.A. and Harris, M.L. (2018), "Building small firm performance through intellectual capital development: exploring innovation as the 'black box' ", *Journal of Business Research*, Vol. 88 No. 7, pp. 321-327.
- [Mckinsey.com/~/media/mckinsey/dotcom/client_service/Automotive%20and%20As sembly/PDFs/McK_The_road_to_2020_and_beyond.ashx](https://www.mckinsey.com/~/media/mckinsey/dotcom/client_service/Automotive%20and%20As sembly/PDFs/McK_The_road_to_2020_and_beyond.ashx)
- McLean, L. D. (2005). Organizational culture's influence on creativity and innovation: A review of the literature and implications for human resource development. *Advances in developing human resources*, 7(2), 226-246.
- Mendoza, X., Espinosa-Méndez, C., & Araya-Castillo, L. (2019). When geography matters: International diversification and firm performance of Spanish multinationals. *BRQ Business Research Quarterly*.
- Meuter, M. L., Ostrom, A. L., Bitner, M. J., & Roundtree, R. (2003). The influence of technology anxiety on consumer use and experiences with self-service

- technologies. *Journal of Business Research*, 56(11), 899-906.
- Miller, D. (2019). *The Resource-Based View of the Firm*. In *Oxford Research Encyclopedia of Business and Management*.
- Milošević, N., Dobrota, M., & Rakočević, S. B. (2018). Exploring the impact of intellectual capital components on project performance. *European Project Management Journal*, 8(2), 43-51.
- Ministry of Industry, Mines and Trade (2015). *Auto Production Comperative Statistics (In persian)*
- Miron, E., Erez, M. and Naveh, E. (2004). Do personal characteristics and cultural values that promote innovation, quality, and efficiency compete or complement each other? *Journal of Organizational Behavior*, 25(2), 175-199.
- Mitchell, V. L. and Zmud, R. W. (1999). The effects of coupling IT and work process strategies in redesign projects. *Organization Science*, 10(4), 424-438.
- Mohammed, A. R. K., & Bilal, A. (2019, May). Manufacturing Enhancement through Reduction of Cycle Time using Time-Study Statistical Techniques in Automotive Industry. In *2019 IEEE International Conference on Industrial Cyber Physical Systems (ICPS)* (pp. 681-686). IEEE
- Mohr, J. J., Sengupta, S. and Slater, S. F. (2009). *Marketing of high-technology products and innovations*: Pearson Prentice Hall.
- Molloy, J. C., & Barney, J. B. (2015). Who captures the value created with human capital? A market-based view. *Academy of Management Perspectives*, 29(3), 309-325.
- Mondal, A., & Ghosh, S. K. (2012). Intellectual capital and financial performance of Indian banks. *Journal of Intellectual Capital*, 13(4), 515-530.
- Moreira, J., & Silva, M. J. (2010, September). Marketing innovation and innovative capability of marketing: study of Portuguese firms. In *European Conference on Innovation and Entrepreneurship*. Academic Conferences International Limited, September (pp. 403-411).
- Moullin, M. (2007). Performance measurement definitions: Linking performance measurement and organisational excellence. *International Journal of Health Care Quality Assurance*, 20(3), 181-183.
- Moynagh, M. and Worsley, R. (2002). Tomorrow's consumer—the shifting balance of power. *Journal of Consumer Behaviour*, 1(3), 293-301.
- Muffatto, M. and Roveda, M. (2000). Developing product platforms:: analysis of the

- development process. *Technovation*, 20(11), 617-630.
- Mumford, M. D. (2011). *Handbook of Organizational Creativity*: Elsevier/Academic Press.
- Murat Ar, I. and Baki, B. (2011). Antecedents and performance impacts of product versus process innovation: Empirical evidence from SMEs located in Turkish science and technology parks. *European Journal of Innovation Management*, 14(2), 172-206.
- Naranjo-Valencia, J. C., Jiménez-Jiménez, D. and Sanz-Valle, R. (2011). Innovation or imitation? The role of organizational culture. *Management Decision*, 49(1), 55-72.
- Naranjo-Valencia, J. C., Jiménez-Jiménez, D., & Sanz-Valle, R. (2016). Studying the links between organizational culture, innovation, and performance in Spanish companies. *Revista Latinoamericana de Psicología*, 48(1), 30-41.
- Narasimhan, R. and Kim, S. W. (2002). Effect of supply chain integration on the relationship between diversification and performance: evidence from Japanese and Korean firms. *Journal of Operations Management*, 20(3), 303-323.
- Narasimhan, R. and Talluri, S. (2009). Perspectives on risk management in supply chains. *Journal of Operations Management*, 27(2), 114-118.
- Narula, R. (2014). *Globalization and technology: Interdependence, innovation systems and industrial policy*: John Wiley & Sons.
- Neely, A. , Gregory, M. and Platts, K. (2005), “Performance measurement system design: a literature review and research agenda”, *International Journal of Operations & Production Management* , Vol. 25 No. 12, pp. 1228-1263.
- Nelson, R. (1992). Recent writings on competitiveness: boxing the compass. *California Management Review*, 34(2), 127-137.
- Ngah, R., & Ibrahim, A. R. (2011). The Influence of intellectual capital on knowledge sharing: small and medium enterprises' perspective. *Communications of the IBIMA*.
- Ngo, L. V., & O'Cass, A. (2013). Innovation and business success: The mediating role of customer participation. *Journal of Business Research*, 66(8), 1134-1142.
- Nguyen, H. N. and Mohamed, S. (2011). Leadership behaviors, organizational culture and knowledge management practices: an empirical investigation. *Journal of Management Development*, 30(2), 206-221.
- Noonan, R., & Wold, H. (1980). *PLS Path Modelling with Latent Variables: Analysing*

- School Survey Data Using Partial Least Squares-Part II 1, 2. *Scandinavian Journal of Educational Research*, 24(1), 1-24
- Nosratpour, M., Nazeri, A., & Soofifard, R. (2018). Study on the relationship between supply chain quality management practices and performance in the Iranian automotive industry. *International Journal of Productivity and Quality Management*, 23(4), 492-523.
- Ojo, O. (2010). Organisational Culture and Corporate Performance: Empirical Evidence from Nigeria. *Journal of Business Systems, Governance and Ethics*, 5(2), 1.
- Oliva, F. L., Semensato, B. I., Prioste, D. B., Winandy, E. J. L., Bution, J. L., Couto, M. H. G., ... & Singh, S. K. (2019). Innovation in the main Brazilian business sectors: characteristics, types and comparison of innovation. *Journal of Knowledge Management*, 23(1), 135-175.
- Ordanini, A., Parasuraman, A., & Rubera, G. (2014). When the recipe is more important than the ingredients: A qualitative comparative analysis (QCA) of service innovation configurations. *Journal of Service Research*, 17(2), 134-149.
- Ouchi, W. G., & Wilkins, A. L. (1985). Organizational culture. *Annual review of sociology*, 11(1), 457-483.
- Paalanen, A., Kujansivu, P. and Parjanen, S. (2009). Measuring the effects of an innovation-focused intervention. *Proceedings of the 2009 Proceedings of the XX ISPIM Future of Innovation Conference*, Vienna, Austria,
- Pacheco-de-Almeida, G. and Zemsky, P. (2007). The timing of resource development and sustainable competitive advantage. *Management science*, 53(4), 651-666.
- Pallant, J. (2010). *SPSS survival manual: A step by step guide to data analysis using SPSS*. Maidenhead: Open University Press/McGraw-Hill.
- Pang, K., & Lu, C. S. (2018). Organizational motivation, employee job satisfaction and organizational performance. *Maritime Business Review*.
- Papatheodorou, A. (2006). *Corporate Rivalry and Market Power: Competition Issues in the Tourism Industry*: I. B. Tauris.
- Parveen, S., Senin, A. A., & Umar, A. (2015). Organization culture and open innovation: a quadruple Helix open innovation model approach. *International Journal of Economics and Financial Issues*, 5(1S), 335-342.
- Paulson, A. S., O'Connor, G. C. and Robeson, D. (2007). Evaluating radical innovation portfolios. *Research-Technology Management*, 50(5), 17-29.

- Payday, P., Maliki, M. and Mousapour, H. (2019), Determining the effect of marketing dashboards on market performance through marketing strategy implementation speed, market information management capability and technological uncertainty- Case study - Supplier of Iran Khodro Company, Second National Conference on New Thoughts in Business Management, Tehran - Sharif University of Technology, Iranian Association of Marketing Science
- Peng, D. X., Schroeder, R. G. and Shah, R. (2008). Linking routines to operations capabilities: A new perspective. *Journal of operations management*, 26(6), 730-748.
- Peppard, J. and Rylander, A. (2001). Using an intellectual capital perspective to design and implement a growth strategy:: the case of APiON. *European Management Journal*, 19(5), 510-525.
- Perdomo-Ortiz, J., González-Benito, J. and Galende, J. (2006). Total quality management as a forerunner of business innovation capability. *Technovation*, 26(10), 1170-1185.
- Perks, H., & Moxey, S. (2011). Market-facing innovation networks: How lead firms partition tasks, share resources and develop capabilities. *Industrial Marketing Management*, 40(8), 1224-1237.
- Peters, T. J. and Waterman, R. H. (1982). *In search of excellence: Lessons from American's best-run companies*. New York: Harper& Row.
- Pew Tan, H., Plowman, D. and Hancock, P. (2008). The evolving research on intellectual capital. *Journal of intellectual capital*, 9(4), 585-608.
- Pfeffermann, N. (2013). Innovation communication as an integrative management capability in digital innovation ecosystems. In *Strategy and Communication for Innovation* (pp. 241-269). Springer, Berlin, Heidelberg.
- Phillips, R. W., & Phillips, R. (1997). *Innovation and firm performance in Australian manufacturing*. Industry Commission.
- Pietersen, C. (2017). Organizational culture: a foundational perspective. *African Journal of Economic and Management Studies*, 8(3), 262-273.
- Pilinkus, D. and Boguslauskas, V. (2015). The short-run relationship between stock market prices and macroeconomic variables in Lithuania: an application of the impulse response function. *Engineering Economics*, 65(5).
- Pirozzi, M.G. and Ferulano, G.P. (2016), "Intellectual capital and performance measurement in healthcare organizations: an integrated new model", *Journal of*

- Intellectual Capital, Vol. 17 No. 2, pp. 320-350.
- Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, 12(4), 531-544.
- Radnor, Z.J. and Barnes, D. (2007), "Historical analysis of performance measurement and management in operations management", *International Journal of Productivity and Performance Management*, Vol. 56 No. 5, pp. 384-396.
- Rahman, A., & Safinas, N. (2017). The effect of intellectual capital towards financial performance of companies: an analysis of manufacturing sector in Malaysia/Nur Safinas Abdul Rahman.
- Rai, R. K. (2011). Knowledge management and organizational culture: a theoretical integrative framework. *Journal of knowledge management*, 15(5), 779-801.
- Rajapathirana, R. J., & Hui, Y. (2018). Relationship between innovation capability, innovation type, and firm performance. *Journal of Innovation & Knowledge*, 3(1), 44-55.
- Ramadan, B. M., Dahiyat, S. E., Bontis, N., & Al-Dalahmeh, M. A. (2017). Intellectual capital, knowledge management and social capital within the ICT sector in Jordan. *Journal of Intellectual Capital*, 18(2), 437-462.
- Ramdhani, A., Ramdhani, M. A., & Ainissyifa, H. (2017). Conceptual Framework of Corporate Culture Influenced on Employees Commitment to Organization. *International Business Management*, 11(3), 826-830.
- Rauf, F. H. A., Khalid, F. M., Mustafa, N. A., Isa, N. F. M., Johari, J. N. J., Ganes, A., & Krishnan, L. (2018). The Effect of Intellectual Capital on Value Creation: Malaysian Evidence. *Global Business & Management Research*, 10.
- Rauter, R., Perl-Vorbach, E., & Baumgartner, R. J. (2017). Is open innovation supporting sustainable innovation? Findings based on a systematic, explorative analysis of existing literature. *International Journal of Innovation and Sustainable Development*, 11(2-3), 249-270.
- Reynolds, P. D. (1986). Organizational culture as related to industry, position and performance: a preliminary report [1]. *Journal of Management Studies*, 23(3), 333-345.
- Rhee, J., Park, T. and Lee, D. H. (2010). Drivers of innovativeness and performance for innovative SMEs in South Korea: Mediation of learning orientation. *Technovation*, 30(1), 65-75.
- Riahi-Belkaoui, A. (2003). Intellectual capital and firm performance of US

- multinational firms: a study of the resource-based and stakeholder views. *Journal of Intellectual capital*, 4(2), 215-226.
- Ribau, C. P., Moreira, A. C., & Raposo, M. (2017). SMEs innovation capabilities and export performance: an entrepreneurial orientation view. *Journal of Business Economics and Management*, 18(5), 920-934.
- Rich, N., & Bateman, N. (2003). Companies' perceptions of inhibitors and enablers for process improvement activities. *International Journal of Operations & Production Management*, 23(2), 185-199.
- Richard, P. J., Devinney, T. M., Yip, G. S. and Johnson, G. (2009). Measuring organizational performance: Towards methodological best practice. *Journal of management*.
- Rodil, Ó., Vence, X., & del Carmen Sánchez, M. (2016). The relationship between innovation and export behaviour: The case of Galician firms. *Technological Forecasting and Social Change*, 113, 248-265.
- Rohlfers, S., & Zhang, Y. (2016). Culture studies in international business: paradigmatic shifts. *European Business Review*, 28(1), 39-62.
- Rojniruttikul, N. (2019, March). Development of Strategic Supply Chain Management for Autoparts and Components Manufacturing Company. In *Proceedings of the 2019 2nd International Conference on Computers in Management and Business* (pp. 52-55). ACM.
- Romijn, H., & Albaladejo, M. (2002). Determinants of innovation capability in small electronics and software firms in southeast England. *Research policy*, 31(7), 1053-1067.
- Roos, G. Ö. R. A. N., & Jacobsen, K. R. I. S. T. I. N. E. (1999). Management in a complex stakeholder organisation. *Monash Mt Eliza Business Review*, 2, 82-93.
- Rose, B. (2005). The Effect of Disclosing Intellectual Capital (The CoreAsset for the Third Millennium Economic entities) on the Internal and External Financial Statements: Users.
- Saberi, B. (2017). Problems of Iran's Automotive Industry Competitiveness. *Izvestia Uralskogo Gosudarstvennogo Ekonomiceskogo Universiteta*, 70(2).
- Sadq, Z. M., Ahmad, B. S., Saeed, V. S., Othman, B., & Mohammed, H. O. (2020). The relationship between intellectual capital and organizational trust and its impact on achieving the requirements of entrepreneurship strategy (The case of Korek Telecom Company, Iraq). *International Journal of Advanced Science and*

- Sahoo, S. (2019). Quality management, innovation capability and firm performance. *The TQM Journal*.
- Sanderson, D. (2006). Using a competing values framework to examine university culture: Queensland University of Technology.
- Santi, C., & Santoleri, P. (2017). Exploring the link between innovation and growth in Chilean firms. *Small Business Economics*, 49(2), 445-467.
- Santos-Vijande, M. L. and Álvarez-González, L. I. (2007). Innovativeness and organizational innovation in total quality oriented firms: The moderating role of market turbulence. *Technovation*, 27(9), 514-532.
- Sanz-Valle, R., Naranjo-Valencia, J. C., Jiménez-Jiménez, D. and Perez-Caballero, L. (2011). Linking organizational learning with technical innovation and organizational culture. *Journal of knowledge management*, 15(6), 997-1015.
- Sardo, F., & Serrasqueiro, Z. (2017). A European empirical study of the relationship between firms' intellectual capital, financial performance and market value. *Journal of Intellectual Capital*, 18(4), 771-788.
- Sardo, F., Serrasqueiro, Z., & Alves, H. (2018). On the relationship between intellectual capital and financial performance: A panel data analysis on SME hotels. *International Journal of Hospitality Management*, 75, 67-74.
- Sarkis, J., Gonzalez-Torre, P., & Adenso-Diaz, B. (2010). Stakeholder pressure and the adoption of environmental practices: The mediating effect of training. *Journal of operations Management*, 28(2), 163-176.
- Saunila, M. (2016). Performance measurement approach for innovation capability in SMEs. *International Journal of Productivity and Performance Management*, 65(2), 162-176.
- Saunila, M. and Ukko, J. (2013). Facilitating innovation capability through performance measurement: A study of Finnish SMEs. *Management Research Review*, 36(10), 991-1010.
- Saunila, M., Pekkola, S. and Ukko, J. (2014). The relationship between innovation capability and performance: The moderating effect of measurement. *International Journal of Productivity and Performance Management*, 63(2), 234-249.
- Schaltegger, S., Hörisch, J., & Freeman, R. E. (2019). Business cases for sustainability: a stakeholder theory perspective. *Organization & Environment*, 32(3), 191-212.

- Schein, E. H. (1985). *Organisational culture and leadership: A dynamic view*. San Francisco.
- Schein, E. H. (2006). *Organizational culture and leadership* (Vol. 356): Wiley. com.
- Schmenner, R. W., & Vollmann, T. E. (1994). Performance measures: gaps, false alarms, and the “usual suspects”. *International Journal of Operations & Production Management*.
- Schulz, M. and Jobe, L. A. (2001). Codification and tacitness as knowledge management strategies: an empirical exploration. *The Journal of High Technology Management Research*, 12(1), 139-165.
- Secundo, G., Massaro, M., Dumay, J. and Bagnoli, C. (2018), “Intellectual capital management in the fourth stage of IC research”, *Journal of Intellectual Capital*, Vol. 19 No. 1, pp. 157-177.
- Sekaran, U. and Bougie, R. (2013). *Research Methods for Business: A Skill-Building Approach*: Wiley.
- Selden, L., & MacMillan, I. C. (2006). Manage customer-centric innovation-systematically. *Harvard business review*, 84(4), 108.
- Serrat, O. (2017). A primer on talent management. In *Knowledge Solutions* (pp. 385-393). Springer, Singapore.
- Sharma, P. (2019). Intellectual Capital and Financial Performance: A Study of Selected BSE S & P 500 Listed Firms. *Abhigyan*, 36(4), 12-20.
- Sheth, J. (2004). Making India globally competitive. *Vikalpa*, 29(4), 1-9.
- Shih, C.-C. and Huang, S.-J. (2010). Exploring the relationship between organizational culture and software process improvement deployment. *Information & Management*, 47(5), 271-281.
- Siebenhüner, B., & Arnold, M. (2007). Organizational learning to manage sustainable development. *Business strategy and the environment*, 16(5), 339-353.
- Singh, S., Darwish, T. K., & Potočnik, K. (2016). Measuring organizational performance: A case for subjective measures. *British Journal of Management*, 27(1), 214-224.
- Sink, D. S., Tuttle, T. C. and Shin, S.-i. (1989). *Planning and measurement in your organization of the future*: Industrial Engineering and Management Press Norcross, GA.
- Skarzynski, P., & Gibson, R. (2008). *Innovation to the core: A blueprint for transforming the way your company innovates*. Harvard Business Press.

- Škerlavaj, M., Song, J. H., & Lee, Y. (2010). Organizational learning culture, innovative culture and innovations in South Korean firms. *Expert systems with applications*, 37(9), 6390-6403.
- Skillicorn, N. (2016). Success? Idea to value, 18
- Smircich, L. (1983). Concepts of culture and organizational analysis. *Administrative science quarterly*, 339-358.
- Smith, M., Busi, M., Ball, P., & Van der Meer, R. (2008). Factors influencing an organisation's ability to manage innovation: a structured literature review and conceptual model. *International Journal of innovation management*, 12(04), 655-676.
- Smith, S. J. (2017). Intellectual capital disclosure: what benefits, what costs, is it voluntary?.
- Snyder, H. W. and Pierce, J. B. (2002). Intellectual capital. *Annual review of information science and technology*, 36(1), 467-500.
- Soares, A. M., Farhangmehr, M. and Shoham, A. (2007). Hofstede's dimensions of culture in international marketing studies. *Journal of business research*, 60(3), 277-284.
- Soejachmoen, M. P. (2016). Globalization of the Automotive Industry: Is Indonesia Missing Out?. *Asian Economic Papers*, 15(1), 1-19.
- Sok, P., O'Cass, A. and Sok, K. M. (2013). Achieving superior SME performance: Overarching role of marketing, innovation, and learning capabilities. *Australasian Marketing Journal (AMJ)*, 21(3), 161-167.
- Sollosy, M., McInerney, M., & Braun, C. K. (2016). Human Capital: A Strategic Asset Whose Time Has Come to Be Recognized on Organizations' Financial Statements. *Journal of Corporate Accounting & Finance*, 27(6), 19-27.
- Sorooshian, S., Aziz, N. F., Ahmad, A., Jubidin, S. N., & Mustapha, N. M. (2016). Review on performance measurement systems. *Mediterranean Journal of Social Sciences*, 7(1), 123-123.
- [Statista.com/topics/1487/automotive-industry/](https://www-statista-com.topics/1487/automotive-industry/)
- Teece, D. (2011). Human capital, capabilities, and the firm: Literati, numerate, and entrepreneurs in the twenty-first century enterprise. *The Oxford handbook of human capital*, 527-561.
- Steenkamp, J.-B. E., Hofstede, F. t. and Wedel, M. (1999). A cross-national investigation into the individual and national cultural antecedents of consumer

- innovativeness. *The Journal of Marketing*, 55-69.
- Stefan, I., & Bengtsson, L. (2017). Unravelling appropriability mechanisms and openness depth effects on firm performance across stages in the innovation process. *Technological Forecasting and Social Change*, 120, 252-260
- Stewart, T. A. (2007). *The wealth of knowledge: Intellectual capital and the twenty-first century organization*: Crown Business.
- Stock, R. M., Six, B., & Zacharias, N. A. (2013). Linking multiple layers of innovation-oriented corporate culture, product program innovativeness, and business performance: A contingency approach. *Journal of the Academy of Marketing Science*, 41(3), 283-299.
- Stokes, P., Baker, C., & Lichy, J. (2016). The role of embedded individual values, belief and attitudes and spiritual capital in shaping everyday postsecular organizational culture. *European Management Review*, 13(1), 37-51.
- Sturgeon, T. J., & Van Biesebroeck, J. (2011). Global value chains in the automotive industry: an enhanced role for developing countries. *International Journal of Technological Learning, Innovation and Development*, 4(1), 181-205.
- Sturgeon, T., & Lester, R. K. (2004). The new global supply base: new challenges for local suppliers in East Asia. *Global production networking and technological change in East Asia*, 35-87.
- Subramaniam, M. and Youndt, M. A. (2005). The influence of intellectual capital on the types of innovative capabilities. *Academy of Management Journal*, 48(3), 450-463.
- Subramanian, A. and Nilakanta, S. (1996). Organizational innovativeness: exploring the relationship between organizational determinants of innovation, types of innovations, and measures of organizational performance. *Omega*, 24(6), 631-647.
- Sumedrea, S. (2013). Intellectual capital and firm performance: A dynamic relationship in crisis time. *Procedia Economics and Finance*, 6, 137-144.
- Syrett, M. and Lammiman, J. (1997). *From Leanness to fitness. Developing corporate muscle*. Institute of Personnel and Development, London.
- Tabachnick, B. G. and Fidell, L. (2012). *Using Multivariate Statistics: International Edition*: Pearson.
- Tan, K. C., Lyman, S. B., & Wisner, J. D. (2002). Supply chain management: a strategic perspective. *International journal of operations & production*

management.

- Tatfi, S. A. M. (2011). The factors hindering innovation at Iranian SMEs. *World Applied Sciences Journal*, 14(11), 1635-1641
- Tehran Stock Exchange, (2017). automotive-manufacturers-Suppliers index (In Persian)
- Tenenhaus, M., Vinzi, V. E., Chatelin, Y. M., & Lauro, C. (2005). PLS path modeling. *Computational statistics & data analysis*, 48(1), 159-205.
- Thakur, R., & Hale, D. (2013). Service innovation: A comparative study of US and Indian service firms. *Journal of Business Research*, 66(8), 1108-1123.
- Tian, R. G., Sigamani, P., & Malhotra, S. (2018). Business anthropology. *The International Encyclopedia of Anthropology*, 1-11.
- Tidd, J., & Bessant, J. R. (2018). *Managing innovation: integrating technological, market and organizational change*. John Wiley & Sons.
- Tidd, J., Bessant, J., & Pavitt, K. (2005). *Managing innovation integrating technological, market and organizational change*. John Wiley and Sons Ltd.
- Tovstiga, G., & Tulugurova, E. (2009). Intellectual capital practices: a four-region comparative study. *Baron, David P Journal of intellectual capital*, 10(1), 70-80.
- Tseng, M. L., Wu, K. J., Chiu, A. S., Lim, M. K., & Tan, K. (2019). Reprint of: Service innovation in sustainable product service systems: Improving performance under linguistic preferences. *International Journal of Production Economics*, 217, 159-170.
- Tuan, N., Nhan, N., Giang, P., & Ngoc, N. (2016). The effects of innovation on firm performance of supporting industries in Hanoi, Vietnam. *Journal of Industrial Engineering and Management*, 9(2), 413-431.
- Tushman, M. L. (1997). Winning through innovation. *Strategy & Leadership*, 25(4), 14-19.
- Ulrich, K. T. (2003). *Product design and development*: Tata McGraw-Hill Education.
- Ulwick, A. W. (2005). *What customers want: using outcome-driven innovation to create breakthrough products and services (Vol. 71408673)*: McGraw-Hill New York.
- Van Aartsengel, A. and Kurtoglu, S. (2013). *Handbook on Continuous Improvement Transformation: The Lean Six Sigma Framework and Systematic Methodology for Implementation*: Springer.
- Van Dooren, W., Bouckaert, G. and Halligan, J. (2015), *Performance Management in*

- the Public Sector. Routledge, New York, NY.
- Van Lancker, J., Mondelaers, K., Wauters, E., & Van Huylenbroeck, G. (2016). The Organizational Innovation System: A systemic framework for radical innovation at the organizational level. *Technovation*, 52, 40-50.
- Venturoni, B. (2018). Innovation and knowledge at firm-level case study.
- Vereecke, A. and Muylle, S. (2006). Performance improvement through supply chain collaboration in Europe. *International Journal of Operations & Production Management*, 26(11), 1176-1198.
- Voss, G. B. and Voss, Z. G. (2008). Competitive density and the customer acquisition-retention trade-off. *Journal of Marketing*, 72(6), 3-18.
- Wadho, W., & Chaudhry, A. (2018). Innovation and firm performance in developing countries: The case of Pakistani textile and apparel manufacturers. *Research Policy*, 47(7), 1283-1294.
- Walsh, S. T., Boylan, R. L., McDermott, C., & Paulson, A. (2005). The semiconductor silicon industry roadmap: epochs driven by the dynamics between disruptive technologies and core competencies. *Technological Forecasting and Social Change*, 72(2), 213-236.
- Walters, D., Halliday, M. and Glaser, S. (2002). Creating value in the “New economy”. *Management Decision*, 40(8), 775-781.
- Wan, D., Ong, C. H., & Lee, F. (2005). Determinants of firm innovation in Singapore. *Technovation*, 25(3), 261-268.
- Wang, D., Li, H., Shi, S., Huang, X., & Chen, L. (2005). Improving the rate performance of LiFePO₄ by Fe-site doping. *Electrochimica Acta*, 50(14), 2955-2958.
- Wang, X. L., & Hou, Y. Z. (2016, October). Effect of HR Department's Client Relationship Management on Intellectual Capital in China. In *International Conference on Intellectual Capital and Knowledge Management and Organisational Learning* (p. 266). Academic Conferences International Limited.
- Watson, R. T., Pitt, L. F., Berthon, P. and Zinkhan, G. M. (2002). U-commerce: expanding the universe of marketing. *Journal of the Academy of Marketing Science*, 30(4), 333-347.
- Wei, M., Hu, Y., & Zhang, Z. (2018). Evaluation on innovation capability of communication equipment manufacturing industry. *Journal of Xi'an University of Posts and Telecommunications*, (2), 17.

- Wernerfelt, B. (1984). A Resource-Based View of the Firm. *Strategic Management Journal*, 5(2), 171–180.
- Wetzels, M., Odekerken-Schröder, G., & Van Oppen, C. (2009). Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. *MIS quarterly*, 177-195.
- Wilson, M. G., Dejoy, D. M., Vandenberg, R. J., Richardson, H. A., & McGrath, A. L. (2004). Work characteristics and employee health and well-being: Test of a model of healthy work organization. *Journal of occupational and organizational psychology*, 77(4), 565-588.
- Witell, L., Snyder, H., Gustafsson, A., Fombelle, P., & Kristensson, P. (2016). Defining service innovation: A review and synthesis. *Journal of Business Research*, 69(8), 2863-2872.
- Withers, M. C., Drnevich, P. L., & Marino, L. (2011). Doing more with less: the disordinal implications of firm age for leveraging capabilities for innovation activity. *Journal of Small Business Management*, 49(4), 515-536.
- Wonglimpiyarat, J. (2010). Innovation index and the innovative capacity of nations. *Futures*, 42(3), 247-253
- Woodall, R. D., Colby, C. L. and Parasuraman, A. (2007). “E-volution” to Revolution. *Marketing Management*, 16(2), 29-34.
- Woodside, A. G. (2005). Firm orientations, innovativeness, and business performance: Advancing a system dynamics view following a comment on Hult, Hurley, and Knight's 2004 study. *Industrial marketing management*, 34(3), 275-279.
- Woolley, J. L. and Rottner, R. M. (2008). Innovation policy and nanotechnology entrepreneurship. *Entrepreneurship theory and practice*, 32(5), 791-811.
- Xu, J., & Li, J. (2019). The impact of intellectual capital on SMEs' performance in China. *Journal of Intellectual Capital*.
- Xu, J., & Wang, B. (2019). Intellectual capital and financial performance of Chinese agricultural listed companies. *Custos Agronegocio Line*, 15, 273-290.
- Xu, X., Yang, X., Zhan, L., Liu, C.K., Zhou, N. and Hu, M. (2017), “Examining the relationship between intellectual capital and performance of listed environmental protection companies”. *Environmental Progress and Sustainable Energy*, Vol. 36 No. 4, pp. 1055-1066.
- Yami, S., Castaldo, S., Dagnino, B., & Le Roy, F. (Eds.). (2010). *Coopetition: winning strategies for the 21st century*. Edward Elgar Publishing.

- Yilmaz, C. and Ergun, E. (2008). Organizational culture and firm effectiveness: An examination of relative effects of culture traits and the balanced culture hypothesis in an emerging economy. *Journal of world business*, 43(3), 290-306.
- Zaeh, M. F. (2013). *Enabling Manufacturing Competitiveness and Economic Sustainability: Proceedings of the 5th International Conference on Changeable, Agile, Reconfigurable and Virtual Production (CARV 2013), Munich, Germany, October 6th-9th, 2013*: Springer.
- Zawislak, P. A., Fracasso, E. M., & Tello-Gamarra, J. (2018). Technological intensity and innovation capability in industrial firms. *Innovation & Management Review*, 15(2), 189-207.
- Zerenler, M., Hasiloglu, S. B. and Sezgin, M. (2008). Intellectual capital and innovation performance: empirical evidence in the Turkish automotive supplier. *Journal of technology management & innovation*, 3(4), 31-40.
- Zhang, H., Lesly, L. A. M., & Conrad, T. A. N. G. (2018). *A multi-criteria performance assessment model for cadastral survey systems* (Doctoral dissertation, Department of Land Surveying and Geo-Informatics, The Hong Kong Polytechnic University).
- Zheng, C. (2009). *A correlational study of organizational innovation capability and two factors: Innovation drivers and organizational culture*. University of Phoenix, Arizona, United States.
- Ziman, J. (2003). *Technological innovation as an evolutionary process*: Cambridge University Press.
- Zu, X., Robbins, T. L. and Fredendall, L. D. (2010). Mapping the critical links between organizational culture and TQM/Six Sigma practices. *International Journal of Production Economics*, 123(1), 86-106.

LIST OF PUBLICATIONS

1. Masoomzadeh, A., Zakaria, W. N. W., & Masrom, M. (2017, October). Impact of intellectual capital as internal innovation drivers on organizational performance in Iranian auto part manufacturers. *In e-proceedings* (p. 26).
2. Masoomzadeh, A., Zakaria, N. W. W., Masrom, M., Streimikiene, D., & Tavakoli, R. (2019). Organizational Innovation Factors, Capabilities and Organizational Performance in Automotive Industry. *Montenegrin Journal of Economics*, 15(3), 83-100.
3. Masoomzadeh, A., Zakaria, W. N. W., & Maslin Masrom, T. (2020). Intellectual Capital as Key Asset in Iranian Automotive Industry. *Journal of Environmental Treatment Techniques*, 8(1), 429-439.