

Mediating Role of Organizational Innovation among the Product, Process, Marketing Innovation and Organizational Performance in the Government Organizations in Thailand

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Abstract:

The examination of the mediating role of organizational innovation among the product, process, marketing innovation and organizational performance in the government organizations in Thailand is the foremost goal of the existing study. The data were gathered by taking the questionnaire method from the department of research and data was analyzed by employing the PLS-SEM. The results show that positive links among the product, process, and marketing innovation with organizational performance. The findings also show that organizational innovation has positive mediation among the product, process, and marketing innovation on organizational performance. These findings are helpful for the policy developers that they should develop effective policies for innovation adoption that enhance firm performance.

Keywords: Product Innovation, Process Innovation, Marketing Innovation, Organizational Innovation, Organizational Performance

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INTRODUCTION

Innovativeness is an individual of the essential instruments of development strategies to go into the new markets, to amplify the obtainable market distribute and to afford the business with aggressive circumstances. Motivated by the growing struggle in international markets, organizations have on track to take hold of the signs of improvement, while quickly alternating contest and harsh international contest speedily erode the important addition of obtainable goods and services (Jansen, Van Den Bosch, & Volberda, 2006). Therefore, improvements compose a necessary factor of the company strategies for some causes such as to affect extra creative developed processes, to execute improved in the market place, to search for positive status in client's observation and thus to achieve the sustainable aggressive benefit. Mainly above the previous two decades, innovativeness has twisted into a beautiful region of revise for that investigator, who tries to describe, classify and examine its presentation contacts, particularly owed to its sensible application. Improvements afford dense a planned direction to defeat the troubles they come across through motivated to attain the sustainable aggressive benefits (Damanpour & Evan, 1984).

An improvement as a period is not just connected to goods and processes, although is also connected to the advertising

and government. Schumpeter explains different kinds of improvement: fresh goods, the fresh scheme of the invention, the fresh resource of delivering, the development of fresh markets and fresh ways to classify production. Ducker's distinct improvement as the procedure of the equipping in fresh, better capabilities or amplified effectiveness (Rosenbusch, Brinckmann, & Bausch, 2011). In this investigation, the OCED Oslo guidebook, which is the major global foundation of strategy for essential and assessing improvement behaviors as well as for collection and exercise of connected information, has been taken as the essential situation resource to explain, classify and identify improvements at the compact stage. In OECD Oslo labor-intensive, four dissimilar improvement kinds are introduced. These are invention improvement, development improvement, selling improvement and governmental improvement. Invention and development improvements are directly connected to the idea of technical growth. An invention improvement is the opening of a first-class service that is fresh or extensively better concerning its personality or projected uses, plus important development in technological condition, mechanisms, and resources included software, user responsiveness or additional practical personality (López-Nicolás & Meroño-Cerdán, 2011). Invention improvements can exploit new

technologies and information or can be supported on the new uses or arrangement of obtainable technologies or information. The term invention warps both services and goods. Invention improvement is a complex procedure motivated by the advancing technologies, changing client's requirements, limitation invention life rotations and growing universal contest. For achievement, it must absorb strong contact within the compact and additional among the compact and its suppliers and clients. A progression improvement is the completion of a fresh or extensively better invention or delivery system. This includes important changes in the techniques, apparatus and the software (Löf & Heshmati, 2006). Development improvements can be proposed to reduce component costs of manufacture or relief, to amplify value, or to create or transport fresh or extensively better goods worried that whereas the beginning of fresh goods is usually unspoken to have a patent, positive result on the development of profit and service, progression improvement, due to its saving environment, can have an extra foggy effect. An advertising improvement is the completion of a fresh marketing technique relating important changes in invention drawing or covering, invention assignment, invention support or pricing. Advertising improvements aim at addressing client requirements improved, opening up fresh markets, or recently positioning a firm's invention in the market place with the target of rising firm's sales. Advertising improvements are powerfully connected to pricing strategies, invention pack up plan properties, invention situation and advertising actions along with the ranks of four P's of advertising (Aragón-Correa, García-Morales, & Cordon-Pozo, 2007).

At last, a governmental improvement is the completion of a fresh governmental system in the firm's industry practices, place of work association or exterior affairs. Governmental improvements have an inclination to enlarge compact presentation by dropping executive and contract expenses, improving office agreement, fast entrance to non-tradable resources or dropping expenses of goods. Instances would be the beginning of observe of codifying information by establishing the record of most excellence performance, training learned and extra information, as a result, that they are extra simply available to further: the beginning of preparation plan for worker growth and better worker preservation or the beginning of a contractor growth plan (Tsai, 2001).

Therefore governmental improvements are powerfully connected with all executive difficult task of renewing the governmental schedule, mechanisms, procedures, systems, etc. to support collaboration, information distribution, collaboration, coordination, learning and innovativeness (Theyel, 2000).

Table 1: Innovative Active Enterprises in Thailand

	2012-2014	2014-2016
Innovation	52%	50%
Active		
Product	18%	26%
Innovator		
Process	13%	17%
Innovator		
Wider	42%	38%
Innovator		

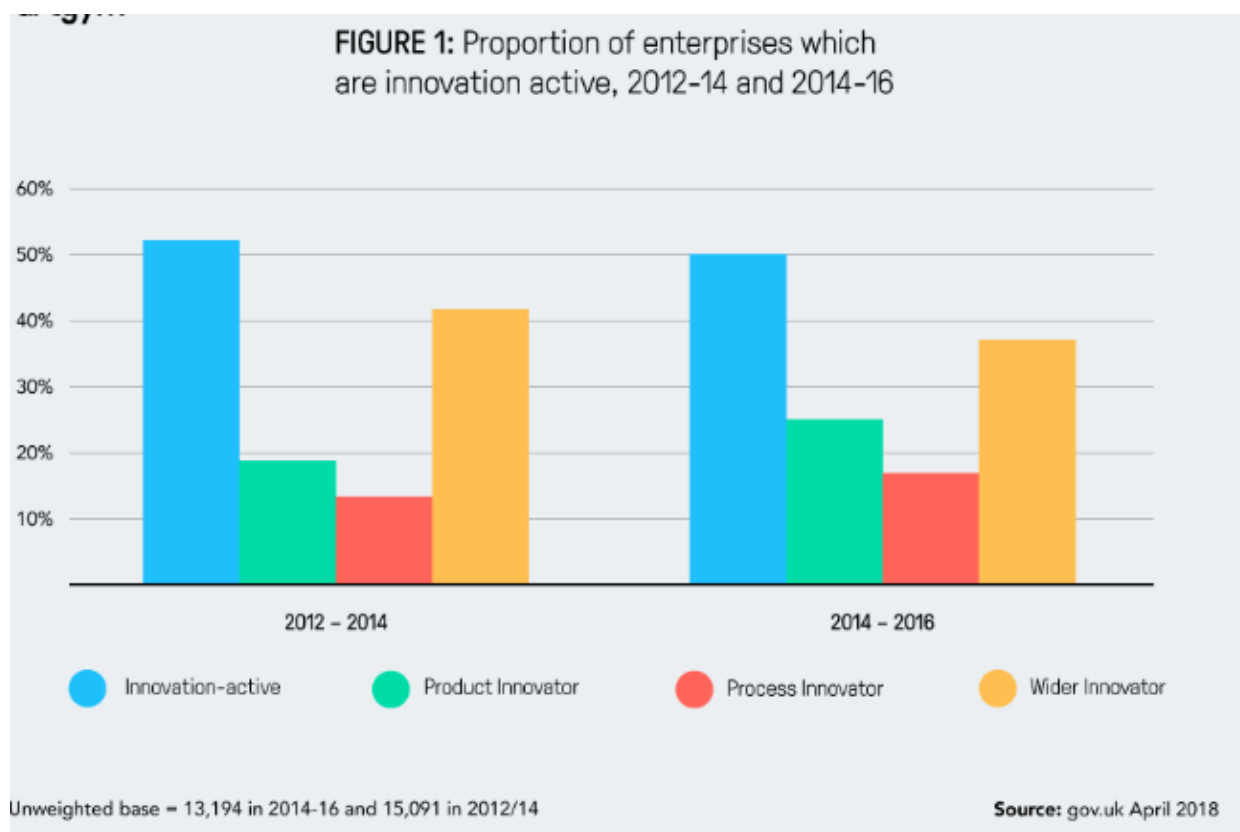


Figure 1: Innovative Active Enterprises in Thailand

One of the most important investigate region in the improvement journalism aspires to discover the recognized affairs among improvement kinds and dense presentation. While there are pretty various theoretical information, investigative and experimental information are incomplete both in conditions of records and the coverage and intensity of the investigation. Only a little information has closely examined the connection among improvement kinds and dense presentation as Jin et al (2004) acknowledge. The experimental studies paying attention to the connections among a little extent of improvement kinds and a particular presentation feature. In this school work, we aspire to investigate improvements and their things on a dense presentation by the investigative invention, marketing, and governmental innovations, process, as well as by focusing on the different feature of dense presentation such as inventive presentation, invention presentation, market presentation, and economic presentation. For that reason, the major payment of this investigation is the complete innovation-presentation investigation based on the experimental information, which not just exposed the positive things of improvement kinds on dense presentation but also yielded a trail of connections between these changeable using structural equations modeling move toward (Wang & Wang, 2012).

This article has five divisions. Following the opening division, we temporarily nearby in division 2 the study and our hypotheses. In division 3, the experimental records and investigate methods are obtainable. Division 4 introduces the results. At last, in division 5 the conservation of conclusion, findings and ending observations are given.

LITERATURE REVIEW

Hypothetical information is the initiate of the improvement journalism that has been developed and grown by the investigate, which try to explain the improvement ideas by essential governmental policy, processes and personality whereby corporation analysis and understand their hard work for inventive and imaginative dreams concerning their goods, markets and processes (Hogan & Coote, 2014).

At the current time, due to the strong universal contest, both personality and companies start to calculate and to concern their improvement strategies and industrial abilities with the reason of the ahead aggressive improvement. Officially, improvement is measured as the expansion and fresh request, with the intention of introducing freshness into the financial region.

It can be imagined as the conversion of information to profitable worth. Improvement has huge business significance due to its possible for growing the effectiveness and the prosperity of companies. In fact, the input cause for innovativeness is the aspiration of contests to attain amplified company presentations and amplified the aggressive edge. Companies acquire extra aggressive benefit and market distribute according to the stage of the significance they provide to the improvements, which are very important features for companies to construct standing in the bazaar and hence to amplify their advertise share (Jiménez-Jiménez & Sanz-Valle, 2011).

Metcalf confirmed that after the stream of freshness and improvements dry out, firms financial construction resolve in an unmoving situation with tiny development. As a result, improvement plays an important task in creating a variety of

presentations and contests between dense, area and yet countries. For example, the learning by Waterberg et al. exposed that inventive countries had superior efficiency and profits than the fewer-innovative ones. In reality, the belongings of improvements on the dense presentation diverse in an extensive range from transactions, advertise share and prosperity to production and effectiveness. Keogh and Macadam investigated the connection between the firm's presentation and its knowledge with research and innovation (Bain, Mann, & Pirola-Merlo, 2001).

They originate out that a firm's preference for improvements was of fundamental importance in the aggressive situations in classify to attain superior aggressive benefits. Gerick study the personal property of the most important improvements and government grant to different company presentation dealings such as office prosperity, stock advertise charge of revisit and business development. The experimental straight effects of improvements on contact presentation are moderately little, and the profits from improvements are additional probable not direct. On the other hand, inventive firm's looks like to be fewer disposed to returning ghostly and ecological stress than no inventive firms.

Interactions among the Innovation Types

It is understandable that dense have a diverse stage of inventive capabilities, nevertheless, inventive behavior requires to be paying attention to various features simultaneously such as fresh goods, fresh governmental and advertising practices or executive methods and fresh progression technology. While improvement journalism does not expose the termination of whether a particular improvement kind is expected to afford extra or less a contact on a business presentation, it can be completed that improvements manipulate each other and require being implemented in combination. In this research, as a result, we talk about the affairs between the four kinds of improvement that we struggle to calculate. The result of the earlier study involves that governmental structuring important to executive and structural regeneration or progress is a catalyst for the extra kinds of improvements (McDermott & Prajogo, 2012). For example, executive improvements lead to scientific improvements in community libraries; they also recommended conducting additional investigate in other kinds of firms to simplify their conclusions. In the same way, the significance of supportive governmental reorganization and management mechanisms to improve technical improvements in the pharmaceutical business, while governmental structural personality might be an important analyst of progression improvements in the logistic region (Grawe, Chen, & Daugherty, 2009). More lately and particularly, governmental, services and marketing improvements were originated to be interconnected in research on community institute, and that extra study was necessary to explain these results. In view of the obtainable explanatory and observed text, we disagree that governmental improvements, or in extra terms, governmental regeneration in the shape of structural developments most important to the betterment of intra-

governmental management and teamwork mechanisms would donate to the creation of a proper interior situation for the additional kinds of improvements-specifically method, manufactured goods, and marketing – to increase (Hitt, Hoskisson, & Ireland, 1994). As a result, we hypothesize that:

H1: The product innovation has significant positive effects on the organizational innovation in the government organization in Thailand.

Research on Chinese dense explains to us that progression and invention improvements were extensively connected to each other. On the other hand, modern journalism does not afford us with open experimental outcomes for the way of this connection. At rest, a few ultimately connected modern conclusions may live. For example, British firms exposed that increasing the official completion process was essential to follow the incremental invention or service improvements, implying that progress of the processes is heavy energy for the achievement of the improvements (Lanoie, Laurent-Lucchetti, Johnstone, & Ambec, 2011). So inventive clarification given that the footstep of the manufacture processes with recently better reward- such as manufacture quality, speed, value, and little rate-can amplify the ability of the manufactured goods fresh workings, technical specifications, functionalities, ingredients, etc. to get to gather the requirements and needs of the clients better than earlier. So, the next suggestion follows:

H2: The process innovation has significant positive effects on organizational innovation in the government organization in Thailand.

About the advertising-invention improvement connection, we could not discover research clearly investigating advertising-invention improvement communication. There is, in reality, a joint carry among these two kinds of improvements but it is additional general that invention improvements are created throughout alternation in the market place and client hope (Y. Li, Zhao, & Liu, 2006).

Client motivated advertise has assigned amplified significance to the advertising purpose. The client requires is tired to be satisfied throughout advertising innovations and activities, which produce the potential for extra invention improvements, as a result, we assumed that:

H3: The marketing innovation has significant positive effects on organizational innovation in the government organization in Thailand.

Impacts of Innovations on Firm Performance

Improvements can truly improve the dense presentation in many aspects. Mainly, four dissimilar presentations magnitude are working in the journalism to signify dense presentation. These magnitudes are inventive presentations, market presentations, production presentation and economic presentations (Montes, Moreno, & Morales, 2005).

Improvements have significant contact on a business presentation by producing a better advertising place that suggests aggressive benefits and higher presentation. A large amount of investigating focusing on improvement-presentation affairs gives a helpful assessment of superior innovativeness resulting in the amplified business

presentation. But these studies are normally theoretical in the environment and just focus on an only kind of improvement slightly than considering every four improvement kinds already distinct, and after that investigate its contact on the presentation. Progression and invention improvements are mainly general improvement kind examined (Bossert, 1998).

Several of these studies hold additional and fewer an affirmative organization among the improvements and dense presentation, but there is also some research representing a harmful relation or no relation at all. So, all these attempts made need to be maintained by governmental and advertising measures. Usually, researchers ignore governmental and advertising improvements, which are regularly necessary for the development and efficient procedure of a dense.

Moderately few investigations on improvement capabilities advocate governmental and marketing improvements. They point out that more inventive firm's position extra importance on the organization techniques (Otero-Neira, Lindman, & Fernández, 2009).

Even though the weak connection they originate, related improvements with amplified dense sales, and they disputed these governmental improvements slightly than technical improvements appeared to be the most fundamental issue for the wholesales. On the other hand, advertising improvements amplified sales by growing invention consumption and give away extra benefits to firms. Furthermore, in the latest experimental research on British dense showed that diverse kinds of improvements were originated to be connected to improvement presentation.

Inventive presentation is the mixture of overall governmental attainments as a result of regeneration and development hard work done considering different parts of solid innovativeness, i.e. products, processes, governmental arrangement, etc. as a result inventive presentation is a complex build based on the different presentation display pertaining, for example to the fresh patents, fresh invention announcements, fresh plans, fresh processes and the fresh governmental planning's (Lau, Tang, & Yam, 2010). In the beam of the beyond consideration, we are now prepared to suggest that all the diverse kinds of improvements have constructive effects on dense inventive presentation. Then the indirect property of these four kinds of improvements can be projected to guide to the progress in manufacture and advertising presentations through the intervention of inventive presentation. In this admiration, inventive presentation plays the task of a useful focus that carries the constructive effects of improvements to the different aspects of dense presentation (Ho, 2011). As a result, our fundamental assumption on the connection between improvements and inventive presentation is as pursue:

H4: The organizational innovation has significant positive effects on the organizational performance in the government organization in Thailand.

H5: The product innovation has significant positive effects on the organizational performance in the government organization in Thailand.

H6: The process innovation has significant positive effects on the organizational performance in the government organization in Thailand.

H7: The marketing innovation has significant positive effects on the organizational performance in the government organization in Thailand.

Inventive presentation is considering in the journalism because of the very imperative drives of additional aspects of governmental presentation gratitude to the creation of a governmental wisdom weather and direction with permanent hard work for renewals, improvements, exploration knowledge from breakdown and variation too quickly shifting aggressive atmosphere (Calantone, Cavusgil, & Zhao, 2002).

For example, inventive presentation as the synergetic mixture of the conclusions of practical and executive improvements donates absolutely to the governmental prosperity and development. They declare also that inventive presentation is the absent relation among governmental planning courses and presentations. Scientifically inventive goods have a statistically important constructive achievement on working presentation. Associations can deal with the ecological challenges by effectively integrating technological or organizational alternation into their governmental formation that recovers the stage of attainment of their ambitions (Sok & O'Cass, 2011).

As a result, improvements are completed in common to get together such manufacture and advertising ambitions as progress in invention superiority, decreasing in manufacture rate, amplify in advertise distribute, manufacture of fresh markets and amplify in invention flexibility. The inventive presentation can use then constructive belongings on the firm's construction, advertise and economic presentations in the lasting; on the other hand, in the little jog, initiated funds and interior source usages may reason probable losses at initial. Acceptance of fresh technologies for improvements absorbs a primary punishment (García-Morales, Matías-Reche, & Hurtado-Torres, 2008). Normally a grave time stage could exceed to examine positive contacts of improvements on solid presentation. For this motivation, contacts of inventive presentations are initially connected to the non-economic features of business presentations, such as amplified client agreement or manufacture speed, which will guide to superior economic takings soon on. In short, once the inventive presentation develops, manufacture and advertising presentations will also improve and after that, through their intervention, the economic presentation will begin to develop (Darroch, 2005).

Inventive presentation, particularly in the shape of fresh manufactured goods achievements, is related in the journalism to amplify in market shares and sales, as its supply significantly to the approval of obtainable clients and increasing of fresh clients (Lindgreen et al., 2008).

It is moreover probable to declare that in accumulation to fresh invention achievement, achievement in advertising, progression, and governmental improvements jointly guide to a universal amplify in a client agreement and express additional client consideration in the direction of the

inventive dense (Naranjo-Valencia, Jiménez-Jiménez, & Sanz-Valle, 2016).

After controlling for dense volume, business attention and influence, R&D investment absolutely distress dense presentation, i.e. velocity, class, rate effectiveness, and flexibility, look like to be extremely linked to the dense presentation in the executive, process, and manufactured goods improvements according to history journalism (García-Morales, Ruiz-Moreno, & Llorens-Montes, 2007).

For example, long-lasting hard work and superior presentation in improvements promote governmental knowledge and amplifying the velocity and class of the procedure. As a result, technical improvement can simply be integrated and any propose or superiority deficiencies are conquering earlier than the challengers (Ndubisi & Iftikhar, 2012).

Manufacture presentation as a mixture of governmental achievement in improving velocity, superiority, flexibility, and cost-effectiveness on the actions of the daily base would guide sensibly to the improvement of economic returns and market position. The history experimental journalism already verifies that the inspiration at the back situation and implementing such process ambitions as amplifying flexibility for exterior edition, superiority for client agreement, the rate for the loyalty and price decreasing for productivity is to struggle to amplify overall dense presentation at the finish (Feeny & Rogers, 2003).

Resultant from obtainable journalism, the projected connections between improvements and dense presentation are discussed and the hypotheses connected to these changeable are residential (H. Li & Atuahene-Gima, 2002). The investigation structure produced in this research is illustrated. This structure temporarily suggested that the four

diverse kinds of improvements implemented in developed dense will improve their inventive presentation, which will after that develop manufacture, advertise and economic presentations (Yamin, Gunasekaran, & Mavondo, 1999).

H8: The organizational innovation positively mediates among the links of product innovation and organizational performance in the government organization in Thailand.

H9: The organizational innovation positively mediates among the links of process innovation and organizational performance in the government organization in Thailand.

H10: The organizational innovation positively mediates among the links of marketing innovation and organizational performance in the government organization in Thailand.

RESEARCH METHODS

The examination of the mediating role of organizational innovation among the product, process, marketing innovation and organizational performance in the government organizations in Thailand is the foremost goal of the existing study. The data were gathered by taking the questionnaire method from the department of research and data was analyzed by employing the PLS-SEM. For data collection, around 460 questionnaires were distributed among the respondent that are the employees of the research department in government firms in Thailand but only 330 were returned that is 71.74 percent response rate. The organizational performance (OP) has 10 items while organizational innovation (OI) used as a mediator and has 7 items, while product innovation (PI) has 25 items, the process innovation (PRI) has 12 items and marketing innovation (MI) also has 12 items. These variables are mentioned below in Figure 2.

Theoretical Framework

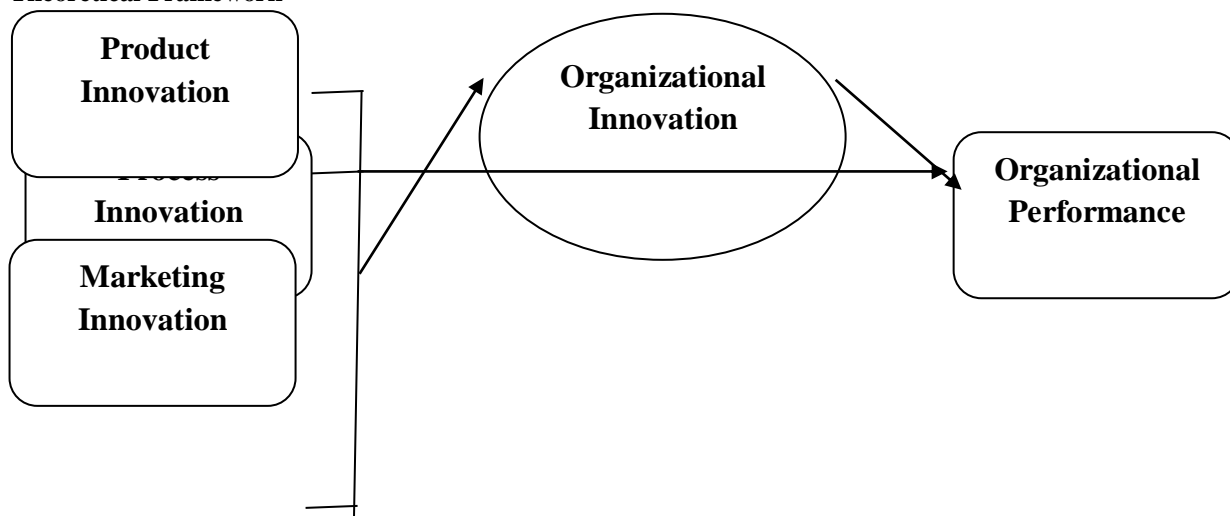


Figure 2: Theoretical Framework

FINDINGS

The findings firstly show the reliability that is valid because Alpha values are more than 0.70 while convergent validity

Table 2: Convergent Validity

also shown by the results and figures show that loadings and AVE are more than 0.50 and CR values are also more than 0.70 and proved the convergent validity and these figures are shown in Table 2.

Constructs	Items	Loadings	Alpha	CR	AVE
Marketing Innovation	MI1	0.773	0.930	0.933	0.538
	MI10	0.728			
	MI11	0.732			
	MI12	0.644			
	MI2	0.667			
	MI3	0.653			
	MI4	0.771			
	MI5	0.714			
	MI6	0.806			
	MI7	0.707			
	MI8	0.815			
	MI9	0.769			
Organizational Innovation	OI1	0.831	0.938	0.950	0.730
	OI2	0.866			
	OI3	0.858			
	OI4	0.830			
	OI5	0.880			
	OI6	0.868			
	OI7	0.848			
Organizational Performance	OP1	0.580	0.920	0.934	0.588
	OP10	0.786			
	OP2	0.765			
	OP3	0.842			
	OP4	0.645			
	OP5	0.810			
	OP6	0.798			
	OP7	0.782			
	OP8	0.815			
Product Innovation	OP9	0.805			
	PI1	0.810	0.962	0.965	0.552
	PI10	0.788			
	PI11	0.705			
	PI12	0.814			
	PI13	0.769			
	PI14	0.745			
	PI15	0.813			
	PI16	0.774			
	PI17	0.800			
	PI18	0.787			
	PI19	0.785			
	PI2	0.773			
	PI20	0.704			

Process Innovation	PI21	0.767	0.936	0.947	0.603
	PI24	0.747			
	PI25	0.807			
	PI3	0.492			
	PI4	0.526			
	PI5	0.556			
	PI6	0.549			
	PI7	0.814			
	PI8	0.803			
	PI9	0.801			
	PRI1	0.842			
	PRI10	0.567			
	PRI11	0.608			
	PRI12	0.842			
	PRI2	0.892			
	PRI3	0.827			
	PRI4	0.893			
	PRI5	0.901			
	PRI6	0.593			
	PRI7	0.561			
	PRI8	0.900			
	PRI9	0.752			

The Fornell Larcker method was the oldest technique to test the discriminant validity and the figures of this method show

that no issue with discriminant validity and these values are shown in Table 3.

Table 3: Fornell Larcker

	MI	OI	OP	PI	PRI
MI	0.734				
OI	0.356	0.855			
OP	0.380	0.409	0.767		
PI	0.389	0.593	0.540	0.743	
PRI	0.508	0.740	0.314	0.548	0.777

Secondly, the cross-loadings were used to check the discriminant validity and the figures show that no problem with discriminant validity the figures are shown in Table 3.

Table 4: Cross-loadings

	MI	OI	OP	PI	PRI
MI1	0.773	0.160	0.203	0.157	0.316
MI10	0.728	0.118	0.117	0.078	0.226
MI11	0.732	0.114	0.095	0.127	0.240
MI12	0.644	0.126	0.096	0.140	0.207
MI2	0.667	0.391	0.421	0.495	0.553
MI3	0.653	0.419	0.433	0.501	0.593
MI4	0.771	0.167	0.201	0.165	0.320

MI5	0.714	0.265	0.263	0.211	0.238
MI6	0.806	0.147	0.221	0.191	0.267
MI7	0.707	0.274	0.261	0.208	0.241
MI8	0.815	0.174	0.225	0.217	0.292
MI9	0.769	0.156	0.143	0.171	0.314
OI1	0.307	0.831	0.345	0.451	0.622
OI2	0.276	0.866	0.347	0.531	0.674
OI3	0.298	0.858	0.332	0.487	0.617
OI4	0.303	0.830	0.302	0.526	0.659
OI5	0.340	0.880	0.319	0.520	0.659
OI6	0.290	0.868	0.380	0.527	0.626
OI7	0.316	0.848	0.424	0.501	0.564
OP1	0.363	0.191	0.580	0.307	0.139
OP10	0.303	0.330	0.786	0.479	0.252
OP2	0.309	0.368	0.765	0.487	0.280
OP3	0.300	0.346	0.842	0.445	0.269
OP4	0.283	0.234	0.645	0.274	0.195
OP5	0.322	0.326	0.810	0.452	0.293
OP6	0.246	0.301	0.798	0.393	0.242
OP7	0.243	0.347	0.782	0.408	0.256
OP8	0.272	0.342	0.815	0.445	0.268
OP9	0.278	0.310	0.805	0.390	0.182
PI1	0.284	0.372	0.477	0.810	0.335
PI10	0.292	0.372	0.454	0.788	0.345
PI11	0.248	0.346	0.341	0.705	0.285
PI12	0.308	0.383	0.453	0.814	0.347
PI13	0.273	0.360	0.388	0.769	0.363
PI14	0.307	0.346	0.406	0.745	0.328
PI15	0.243	0.390	0.400	0.813	0.298
PI16	0.211	0.361	0.304	0.774	0.340
PI17	0.332	0.346	0.464	0.800	0.332
PI18	0.309	0.377	0.473	0.787	0.337
PI19	0.289	0.364	0.457	0.785	0.341
PI2	0.209	0.365	0.299	0.773	0.340
PI20	0.248	0.350	0.353	0.704	0.278
PI21	0.273	0.365	0.392	0.767	0.358
PI24	0.302	0.347	0.402	0.747	0.326
PI25	0.242	0.391	0.401	0.807	0.298
PI3	0.311	0.739	0.287	0.492	0.752
PI4	0.214	0.620	0.388	0.526	0.548
PI5	0.327	0.679	0.280	0.556	0.656
PI6	0.313	0.669	0.263	0.549	0.651
PI7	0.286	0.368	0.463	0.814	0.330

PI8	0.302	0.370	0.453	0.803	0.346
PI9	0.341	0.343	0.466	0.801	0.324
PRI1	0.233	0.621	0.167	0.408	0.842
PRI10	0.673	0.398	0.414	0.497	0.567
PRI11	0.637	0.427	0.410	0.509	0.608
PRI12	0.229	0.624	0.171	0.402	0.842
PRI2	0.351	0.665	0.165	0.395	0.892
PRI3	0.195	0.627	0.148	0.390	0.827
PRI4	0.340	0.672	0.181	0.388	0.893
PRI5	0.345	0.676	0.174	0.390	0.901
PRI6	0.653	0.419	0.433	0.501	0.593
PRI7	0.611	0.374	0.454	0.478	0.561
PRI8	0.341	0.674	0.185	0.406	0.900
PRI9	0.304	0.595	0.159	0.402	0.752

Thirdly, the Heterotrait Monotrait (HTMT) ratio is the latest way to test the discriminant validity was used and the figures are less than 0.90 that is the indication of valid discriminant validity and shown in Table 5.

Table 5: Heterotrait Monotrait Ratio

MI	OI	OP	PI	PRI
----	----	----	----	-----

MI				
OI	0.298			
OP	0.323	0.437		
PI	0.306	0.597	0.562	
PRI	0.471	0.786	0.357	0.566

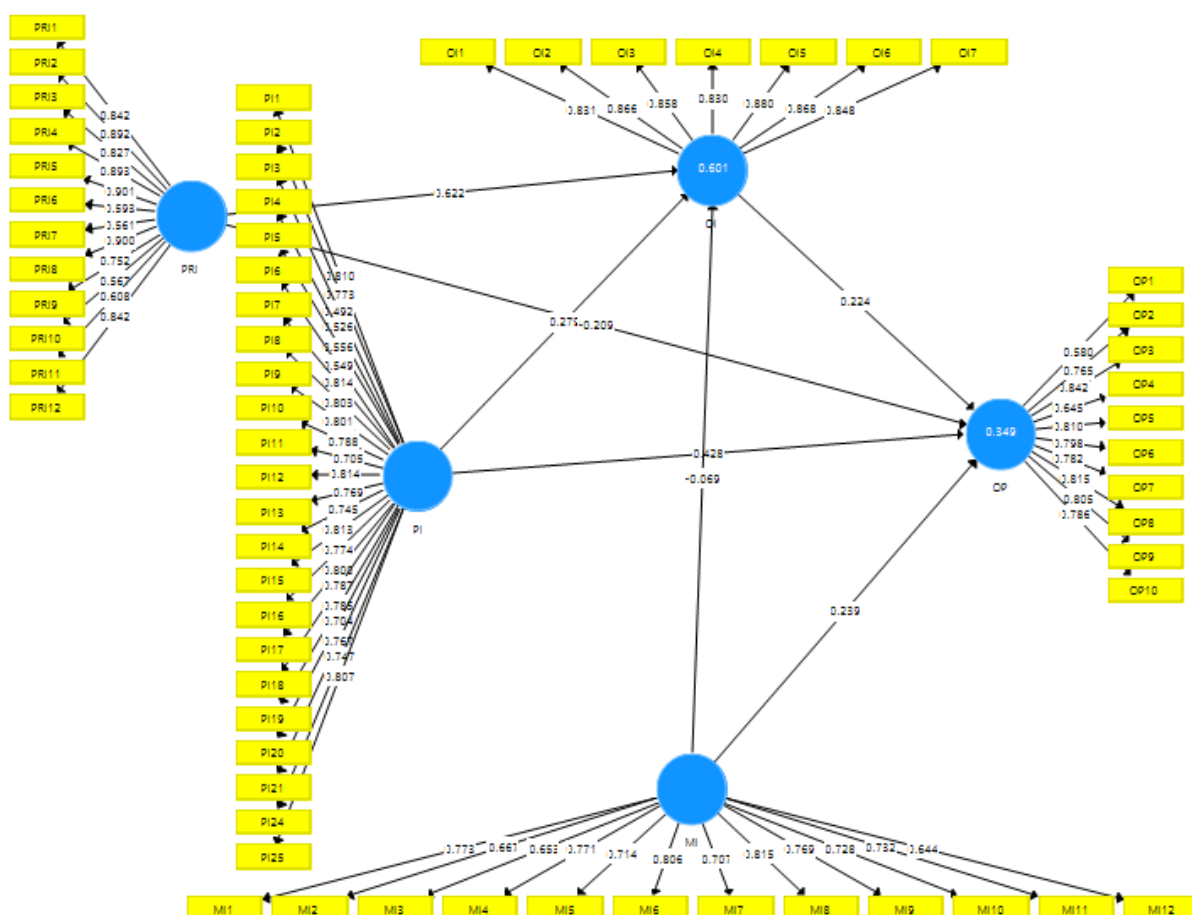


Figure 3: Measurement Model Assessment

The findings show that PI and PRI have positive as well as significant link with OI and accept H1 and H2 while MI has an insignificant link and reject H3. While PI and MI has positive and significant links with OP and accepts H4 and H6 but negative link among the PRI and OP and reject H5.

In addition, OI has positively mediated among the links of PI and OP, PRI and OP and accepts the H8 and H9 while OI negatively and insignificantly mediates among the MI and OP and rejects H10. These figures are given below in Table 6.

Table 6: Path Analysis

	Beta	S.D	t-values	p-values	L.L.	U.L.
MI -> OI	-0.069	0.050	1.371	0.085	-0.144	0.013
MI -> OP	0.239	0.063	3.826	0.000	0.128	0.334
OI -> OP	0.224	0.105	2.128	0.017	0.034	0.378
PI -> OI	0.279	0.050	5.628	0.000	0.205	0.369
PI -> OP	0.428	0.070	6.137	0.000	0.313	0.536
PRI -> OI	0.622	0.062	10.022	0.000	0.513	0.715
PRI -> OP	-0.209	0.104	2.006	0.023	-0.366	-0.022
MI -> OI -> OP	-0.015	0.013	1.184	0.118	-0.038	0.003
PI -> OI -> OP	0.063	0.032	1.943	0.026	0.010	0.114
PRI -> OI -> OP	0.140	0.067	2.089	0.019	0.022	0.244

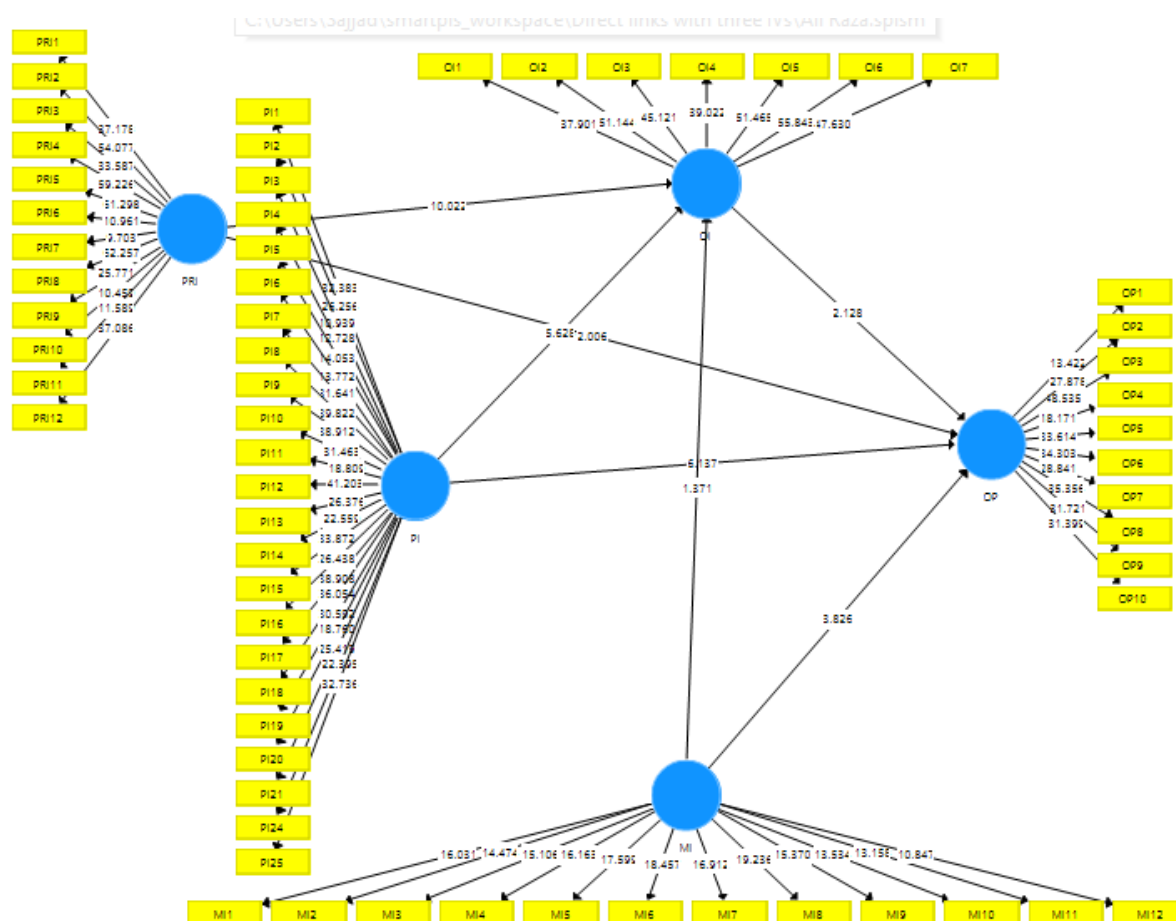


Figure 4: Structural Model Assessment

DISCUSSIONS

The results show that positive links among the product, process, and marketing innovation with organizational performance. The findings also show that organizational innovation has positive mediation among the product, process, and marketing innovation on organizational performance. These outcomes are the same as the outcomes of the past studies who also found a positive link among the types of innovation with organizational innovation and performance. These findings are helpful for the policy developers that they should develop effective policies for innovation adoption that enhance firm performance.

CONCLUSIONS

This study draws the conclusion that the government organization of Thailand is effectively implemented the innovation in the product and processes but not effectively manage the innovation in the marketing process that is the reason product and process enhance the performance of the firm instead of the marketing innovation that are not perfectly managed by the government firms.

Limitations and Future Directions

The limited scope is the limitation of the study because it evaluates only the health sector and also takes only one country in the analysis and it is the suggestion for future

studies that they should enhance their scope by adding more sectors and countries.

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