Modeling Talent Shortage for Entrepreneurship Among Student with Government Policy Support as Mediating Effect: SEM Approach

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Abstract. In this study, it tests the government factor as a mediator to see the significant impact of the relationship between talent demand and talent supply towards talent shortage. As currently, the rise of a talent shortage among student as an entrepreneur in acute condition. The nation right now faced increment number unemployment among young graduate. Government has proposed young graduate to be entrepreneurship to beat this issue—however, the entrepreneurial skills among young graduate far below expectation. Do government do not adequately provide enough support for the entrepreneur ecosystem among young graduate to growth as an entrepreneur. Hence this paper, focusing on developing a significant model to beat talent shortage with the perspective of demand and supply. Then, 371 respondents among public universities student by using simple random sampling. Data analysed with IBM-SPSS and IBM-AMOS to develop a model through path analysed. It was found that the government factor provides a significant factor as a mediator and both talent demand and positively significant towards talent shortage. All hypotheses positively supported. This paper significantly impacts to the government, higher education institution, entrepreneur, and student itself with finding presented.

Keywords: Talent · Entrepreneurship · Government policy

1 Introduction

Scaling up the nation require creative thinkers that take action by using an innovative approach. Entrepreneurs create a new business, services and products to catalyst economic growth and development at the same time provide employment opportunities. Currently, the world economic ecosystem grows complex and interconnects that becoming competitive compare to previously. These conditions have caused the entrepreneur
world turning to challenge to operate their business. Therefore, to overcome this condition, the nation needs to re-look beyond its border to acquire new markets, talents, and skills.

However, it is not easy for any nation to instantly beat that issue to increase national income. The nation requires the right model to accommodate the situation as these issues cause a talent shortage in the nation. The talent shortage has become more acute compared to previous years. The survey conducted by Manpower Group [12, 76] revealed that 45% of employers could not find the skill they needed and felt those candidates have lacked in the specific skills that they were looking. This trend has accelerated talent shortage to its highest level since before the recession.

These tactics help entrepreneurs serve as diplomats in their own right, navigating different sectors and spreading messages and agendas that often advocate causes or national priorities through untapped channels and networks. Entrepreneurs who openly share perspectives, experiences and ideas with other world leaders will continue to benefit communities around the globe by inviting different stakeholders to the table to design solutions for a common good collectively. As these channels for collaboration between entrepreneurs and diplomats strengthen, the talent, skills and wealth of the creative community will ultimately deliver more positive impacts on society.

The talent shortage has become more acute compared to previous years. The survey conducted by Manpower Group [12] revealed that 45% of employers could not find the skill they needed and felt those candidates have lacked in the specific skills that they were looking. This trend has accelerated talent shortage to its highest level since before the recession. According to the Malaysian Global Innovation and Creativity Centre (MaGIC), there are 400,000 individual job seekers in Malaysia that unable to seek paid employment [15]. Furthermore, MaGIC also mentioned that currently, entrepreneur faced a shortage of technical talent, which have moved to overseas searching for better opportunities.

In this study, three significant problems can be discussed in the talent shortage among entrepreneur employer employers. Firstly, the employer could not sustain young talent to maintain their organisation [14, 48]. Furthermore, some employer could not attract young talent due to outdated employee proposition such as unattractive employee benefits, basic salary, flexible working hours, which did not reflect the young talent preferences [55]. As a result, many employers faced difficulties recruiting qualified talent [52].

The second problem on talent shortage indicated that poor collaboration between universities and industries also remains an issue of talent development [16]. A holistic approach with industries player and education institutions could help the future of entrepreneur industry development [6, 27]. However, currently the curriculum available in UAs, the students have to take part in a collaborative programme with the industry and need to undergo the practical or internship programme with the industries. Nevertheless, it seems nothing changes and the issue remains unsettled. Anyhow, this does not mean that the curriculum does not reflect the industries need. Thus, the curriculum has to be improvised in order to confront the rapid changes in the industry. Lastly, Asian Islamic Finance (AIF) reported in their study, the issue of a talent shortage among employer majorly implicated by mismatch skills provided between education institutions and employer [21, 43]. Besides, AIF pointed out that the most required skills are
leadership skill and English proficiency. While the graduates believe they have been equipped enough skill to fit in an organisation.

In addition, government policy also plays a vital role in talent this issue as it could catalyst the better solution [18, 56]. By having support from the government, it would establish better opportunities and capacity building for talent to grow further. Overall, with the fact discussed previously, there is a questionable issue about talent management mechanism practice recently among employer. The shortage of talent would risk to the business growth as it has a direct impact on the bottom to the top lines. About 68% of employers agree that poor talent management programme execution is the leading cause of the talent shortage.

Consequently, to what extent the current Malaysian educational system can produce well-equipped talent in fulfilling the talents supply and demand with government support in industries and universities? Overall, this study attempts to seek the factors that drive talent shortage among entrepreneur employer. Subsequently, it leads to the last statement of the problem, that is which and to what extent the factors are the most dominant in affecting the talent shortage; talent supply or talent demand? As far as it concerns, it seems the imbalance of talent demand and supply in the industries is critical. Apart from that, there is still missing an official model for talent shortage to be as a guideline to manage the talent shortage issue. Duly this study is deemed necessary as these areas remain under the research of the problem, that is, which and to what extent the factors are the most dominant in affecting the talent shortage; talent supply or talent demand? As far as it concerns, it seems the imbalance of talent demand and supply in the industries is critical. Hence this paper attempt to provide a significant model to a talent shortage in entrepreneurship.

2 Literature Review

2.1 Talent Demand

The variables involved has become the structure that thrives in the stream of the research. Three main variables primarily associated with the study comprise talent demand, talent supply and talent shortage. So, at first, the researcher focused on talent demand for the discussion before proceeding into another variables discussion. According to Caspin-Wagner, Massini, and Lewin [26], talent demand is the reflection from the supply of talent and it can be forecasted for future business strategy.

However, over the past ten years, [60] talent demand is referred to those company or organisation that create a talent war and numerous of study have attempted to explain the same [11, 28, 71]. On the other hand, the meaning of talent demand is referring to those that apply talent management activities in their organisation. In which, it requires at least three main necessary activities of talent management, which are attraction, retainment, and development [12, 14, 39].

At the same time, some researchers had a different meaning for talent demand. In which according to [42, 59, 67], they have outlined the character of the talent function in their organisation. Plus, this is the place that is happened to provide a job function for each job scope. Nevertheless, a different point of view by another researcher about
talent demand is when they took or hire talent into their organisation. Then, they provide an appropriate reward, salary and employee benefit to the talent [41, 54, 62, 63, 66].

Furthermore, the trends of talent demand nowadays have been filled with the various generation, from the baby boomers, generation X and generation Y. Generation X or gen X is the demographic cohort that came from the following of baby boomers and the preceding of generation Y or millennials. The birth year of this cohort is a range between the early 1960s to the end of 1970s [61]. Furthermore, [20] described the characteristic of generation Xers in the workplace as a parallel thinker, accepting of change, comfortable with diversity, technologically literate, and lifelong learners. Meanwhile, Generation Y or gen Y is the demographic cohort came from the following of generation X and the preceding of generation Z. The birth year of this cohort range between the early 1980s to early year 2000s [35]. [72] has addressed the characteristic of gen Y in the workplace as an independent, tech-savvy, urgent sense of immediacy, entrepreneur, increasing responsibility, “get off my back” attitude, seek flexibility, free agency attitude, and high maintenance lead to high productivity. With the various generation inside the organisation, the landscape or socio-economic in the particular workplace changed. The way to attract, motivate and reward the various generation also has changed. Especially for generation Y, currently, this generation is the most educated generation compared to the previous generation, in which the generation have the most ease of access to education.

They arrive in the workplace with higher maintenance that they demand higher basic salary, work-life balance, flexible working hour, and attractive employee benefit to accommodate with their current lifestyle and cost of living [8, 19, 64]. From this point, it has indicated the talent revolution either in the workplace or job market. Hence, the organisation also need to synchronise with the situation to acquire the best talent available in the job market; otherwise, they will lose the right talent to fit into their organisation. This situation called a talent war, where each organisation or company have to fight to acquire the best talent with the most efficient cost.

Together, this study has outlined four sub-dimension under talent demand that are basic salary, flexible working hour, and employee benefit. Hence, first hypothesis of the paper is H1: There is a positive effect of Talent Demand towards Talent Shortage.

### 2.2 Talent Supply

In the economic concept of law of supply and demand, when there is demand, then there will be a supply to reflect the situation. The researcher has discussed the concept of talent demand. Thus, in this section, the discussion is about the talent supply. To understand the concept of talent supply better, Liu, Ye, and Guo, [58] said that currently, the shape of talent supply has changed into a different perspective along with their demographic profile. Back in 1988, [44] defined a different concept of talent supply, in this concept talent supply consists of four components; (1) new entrants in the system; (2) former talent that re-enter the system; (3) holdover talent from the preceding year; and (4) immigrant’s talent that has been transferred into another system.

Argued on the previous concept of talent supply, [73] expressed that talent supply can be generated and developed at the companies or organisation. In such case, talent supply
is the place to transform talent into the next level and then can be globally outsourced, based on two basis firm level of experience and capability.

A different definition of talent supply by [38] explained that in the sports industry, it is different when it compared to other industry. The author added that talent supply in sport could be referred from two characteristics, that are closed and open league. The closed league is something like the National Football league, where the source of supply of talent is roster from another team in the league. While for the open league, it is something like world football leagues, where the source of the talent supply does not affect another team if the team wants to increase their talent.

In some cases, talent supply can be understood through the competition as a source of supply. In 1979, [57] has discussed the source of talent supply can be in the form of a competition programme, especially those involved in the entertainment industry. Whilst, training institutions are an extension part of regular talent supply as its function is to become the source to upgrade skilled or attain a specific skill [32]. Unlikely, [36] conveyed the role of the agent as the source of talent supply. Even though the agent is not a fundamental source of talent supply, but the agent is like intermediaries or middleman in the talent supply chain process between the fundamental source and institutions that demand a talent.

Basically, according to [68], the purpose of talent supply is to produce talents, which align with the right job. Apart from that, the increment numbers of retirement workers among baby boomers generation in the workplaces have created a wide gap between demand and supply [53]. On the other side, the sustainable state is being questioned in the production of talent in the talent supply. As sustainable factor plays an essential role in keeping on responding towards the need in talent demand [33, 34], [23] clarification state of the situation when talent supply in an industry at the conditions inelastic or elastic with the relation of wage as the indicator factor. Inelastic condition of talent supply might cause talents to be unemployed as the market become decentralised. In which the talent supply could not unilaterally decide on the amount of talent to be retained. As a result, the talent needs to rival in competing for the position. The outcome from that situation would cause the losing side in the state of unemployed or transfer to another place. Elastic condition of talent supply situation is when talents are hired in the equilibrium state and the revenue sharing decrease along with the amount of talent hired.

The complex and sophisticated business environment faced by organisations has affected the way of talent requirement. It is the job of talent supply to react towards the situation, as to formulate the talent into this competitive advantage environment. The talent supply is responsible for equipping the current talent with the advance employability skill. Apart from that, new talent generation lived in the knowledge economy, where they are focusing on the production of intellectual capabilities rather than natural resources and physical inputs [70, 78]. From this point, an integration development talent in talent supply should be through the combination of knowledge [1, 30], education [6], and technology [1] as the core values.

However, the base function operation of talent supply institutions are outlined from these three pillars, mainly talent [24], infrastructure [25], and curriculum [22, 77].

On that ground, several discussions about the model or theory to operate the those mentioned factors in this current environment. There are two famous model or theory that were always associated with the talent supply to develop a talent that is talent
management and talent supply chain. As per mentioned in an earlier discussion about talent management, it is the strategic management process flow of talent in the organisation. Whilst, [51] integrated the talent management model with supply chain theory to increase short supply. Unlike [34], the author explained that supply chain value can be implemented in the future towards tapping the talent inside or outside the institution or organisation. Hence, second hypothesis of the paper is H2: There is a positive effect of Talent Supply towards Talent Shortage.

2.3 Government Policy Support

Previous literature, there are many discussions on the impact that have been implemented by government policy. On the positive side, [18] studied the impact of government policy on entrepreneur ventures. It was found that the government plays a critical role in creating, promoting, and spur the growth of involvement of the entrepreneur.

Next, [65] studied the impact of government policy with the development indicator on the innovation performance among the small and medium enterprises. It has proven that government policy has spurred the innovation in development among small and medium enterprises. Then, [75] have measured the significant result from the consequences implementation of the government policy, interestingly the authors have proposed two policies (subsidy policy and support policy) should be enforced to avoid adverse effect rather than a single policy that is currently applied.

In conclusion, it is still limited to see government policy studies in the scope of comprehensive discussion. Most of the literature found in the discussion was about the policy, usually in terms of the period. It is sporadic to see a discussion to be on an extended period which is more than ten years. Most of the government policies are effective for five years’ period, due to election changes of the government position in the country. Therefore, the attachment of the government policy dimension with other dimensions is to make sure that it can be used in a long period of model development. The government, as a stand-alone dimension, could not be generalized into the long period of analysis as different policy provided have a different specific impact. However, it is the necessary place this variable as the mediation effect in order to determine the various effect of government policy towards other types of variable. Hence there are three hypotheses H3: There is a positive effect of Government Support towards Talent Shortage; H4: There is a mediation effect of Government Support between Talent Supply and Talent Shortage; and H5: There is a mediation effect of Government Support between Talent Demand and Talent Shortage.

2.4 Talent Shortage

Several researchers have depicted the condition of talent shortage definition. In a modern millennial world, [76] indicated that the talent shortage is where the mass retirement of baby boomers generation in the job market. However, [49] interpreted the meaning of talent shortage through the word of the hidden brain drain. Hence, on whatsoever definition has been delineated by the researchers previously; clearly, the definition has led to the talent, human capital, or workforce shortage in the demand or supply institutions. Later on, further discussion of the talent shortage will be much in detail.
[74] corroborated the previous discussion of talent shortage, and the authors suggested a holistic talent management approach to be implemented as an effective strategy in any particular organisation or industry. Consistent with statement by the previous statement, [29] that multinational companies agreed on the improvement of management strategies is the best way to manage a talent shortage presently. Moreover, the prolonged adverse effect of talent shortage could impede the growth of the industry, create an acute global talent war [17], increase high mobility turnover [13], and hinder business performance [14].

Meanwhile, talent shortage with supply perspective, the combination of essential resources within the higher education institutions that comprised of talent, university infrastructures and curriculum would provide a holistic value of talent development. A contradiction of the development of talent in higher education institutions was often highlighted. Even though numerous plans for talent development have been implemented, it seems the current and the previous plans happen to provide a mismatched skill offered to demand needed [14, 43]. Additionally, [16] presented the importance of collaboration between higher education and industry in building a practical curriculum that could access to job readiness among the talent. From that part, the talent brand would increase among the industries too.

Therefore, the effect of talent shortage in any particular organisation could give a catastrophic event towards future development. A holistic unified of talent management between talent demand and supply of each party such as government, industry organisation and higher education institutions deem to be the best mechanism to overcome the talent shortage issues. It will balance between the talent resource and availability.

![AMOS graphic path model propose](image)
3 Conceptual Framework

Based on Fig. 1 above there are five hypotheses formulated for this study. Five hypotheses of the study are as follows:

H1: There is a positive effect of Talent Demand towards Talent Shortage.
H2: There is a positive effect of Talent Supply towards Talent Shortage.
H3: There is a positive effect of Government Support towards Talent Shortage.
H4: There is a mediation effect of Government Support between Talent Supply and Talent Shortage.
H5: There is a mediation effect of Government Support between Talent Demand and Talent Shortage.

By mean all these hypotheses become the guideline for the study to achieve its objective.

4 Methodology

Research design proposes to use a quantitative method that consists of descriptive, explanatory, and confirmatory [69]. The simple random sampling method used among university students to respondents of the study [47]. The sampling technique used due to its probability characteristic and suites with structural equation modelling (SEM). There are 371 respondents selected to be the unit analysis of the study. The instrument of the research used structured interview that is the questionnaire to collect data from respondents that will be distributed among university students. There are four sections for the questionnaire consists of A (Demographics), B1 (Talent Demand), B2 (Talent Supply), C (Government Policy Support), and D (Talent Shortage) with 10 points Likert scale [46]. That scale uses for sensitive data feedback by respondents and avoids an honest answer.

Two type tools analyses propose to use, first is IBM-SPSS and second is IBM-AMOS. Those two tools are mean to achieve two types of analyses, descriptive and inferential analyses. Then, factor analysis employed to describe variability among observed, correlated variable in terms of the potential lower number of unobserved variables called factors. It’ aims to find independent latent variables. Further, confirmatory analysis (CFA) is used to validate the measurement model of the construct and to test the stated hypothesis in the path model. The method employed in testing the path model of SEM. It is the method to cater limitation in the ordinary least square regression focusing on dealing with a latent construct in the model.

5 Results

A total of 371 respondents were questioned regarding their demographic profiles; female respondents dominated the response in this survey at 69.2% and became the significant impact of this result. This result aligned with the domination of respondents at age 23
and above at 61%, compared to age 22 and below at 39%. The data showed that most of the respondents matured respond to the survey.

Then, to begin with, the CFA testing first, we developed a latent construct for talent supply, talent demand, government support, and talent shortage development to assess the fitness level of the measurement model involved so that the quality of the model could be improved, eventually testing the relationship between independent and dependent constructs [12]. To do that the fitness level can be improved by deleting items that carry lower factor loading. Several rules of thumb to consider in the deletion of items when performing CFA such as 0.40, 0.50, and 0.60 factor loadings. In this study, we retain items beyond the threshold level of 0.60 of factor loadings as counsel in a previous study [5, 10, 46]. Generally, the lower factor loading can impair the assessment of convergent validity such as average variance extracted (AVE) because the lower factor loading will capture lower variance that is explained by the respective latent constructs [4, 9]. Two items have been deleted under government support latent construct as it does not achieve above 0.6 factor loading value.

5.1 Assessment of Normality

After specifying the measurement model in order to ensure the model achieved the fitness level, The normality assessment is made by assessing the measure of skewness for every item. The absolute skewness value of 1.0 or lower indicates the normal distribution of the data. However, for SEM using the Maximum Likelihood Estimator (MLE) like AMOS, it is relatively robust to keep skewness greater than 1.0 in absolute value if the sample size is large and the Critical Region (CR) for the skewness does not exceed 8.0. Typically, the sample size of 200 or more is considered as large enough in MLE even though the data distribution is slightly non-normal.

Another method for normality assessment (refer to Table 1) is by determining the multivariate kurtosis statistic. The result obtained is −2.577, which is considered as normal, the acceptance for the analysis value is between the kurtosis value −3 to +3 [46] and the multivariate kurtosis value of below than 50 [9]. Thus, the researcher could proceed into further analysis. All Composite Reliability (CR) and Average Variance Extracted (AVE) exceed the threshold values of .6 and .5, respectively, indicating the convergent validity and composite reliability of all main constructs in the model [9].

5.2 Structural Model

The three hypotheses were tested simultaneously using SEM as performed in AMOS 21.0. This approach is particularly appropriate for a confirmatory approach which means the model proposed generally has higher levels of evidence in terms of the latent constructs involved in a causal model. SEM exemplified in AMOS entails a sufficient sample size as 200 samples [12, 14] and depends on strict assumptions such as normality, homoscedasticity, and free of outliers to obtain the proper solution and avoid non-convergence estimates [37, 45, 46]. In this present study, we already meet this requirement, so the path estimates we obtained through the maximum likelihood technique were trustworthy. Figure 2 shows that the three main exogenous constructs (Talent
Table 1. Assessment of normality

| Variable | min  | max  | skew | c.r. | kurtosis | c.r. |
|----------|------|------|------|------|----------|------|
| da7      | 3.000| 8.000| .177 | 1.390| -.147    | -.579|
| b11      | 1.000| 7.000| -.243| -1.909| .184     | .723 |
| b10      | 2.000| 7.000| .028 | .221 | -.282    | -1.110|
| b9       | .000 | 6.000| -.080| -.632| -.165    | -.650|
| b8       | .000 | 6.000| -.225| -1.767| -.142    | -.557|
| b7       | 2.000| 7.000| .039 | .310 | -.188    | -.738|
| b6       | 2.000| 7.000| -.086| -.678| -.290    | -1.142|
| b5       | 2.000| 8.000| -.333| -.257| -.114    | -.447|
| b4       | 2.000| 8.000| -.095| -.750| .046     | .180 |
| b3       | 3.000| 10.000| .179| 1.410| .352     | 1.384|
| b2       | 3.000| 9.000| -.065| -.514| -.156    | -.613|
| b1       | 2.000| 8.000| -.001| -.008| -.111    | -.436|
| cd1      | 1.000| 6.000| .119 | .938 | -.254    | -.997|
| cd2      | .000 | 6.000| .150 | 1.177| -.151    | -.592|
| cd3      | 1.000| 7.000| .121 | .952 | -.057    | -.225|
| cd4      | 1.000| 7.000| .032 | .255 | -.021    | -.084|
| cd5      | 3.000| 8.000| .078 | .617 | -.311    | -1.223|
| ca1      | 3.000| 8.000| .049 | .389 | -.109    | -.430|
| ca2      | 2.000| 8.000| -.040| -.317| -.181    | -.711|
| ca3      | 3.000| 9.000| .168 | 1.324| -.291    | -1.145|
| ca4      | 4.000| 9.000| .163 | 1.281| -.325    | -1.278|
| ca5      | 2.000| 8.000| -.002| -.013| .337     | 1.326|
| ca6      | 2.000| 8.000| .242 | 1.903| .067     | .265 |
| ca7      | 2.000| 8.000| .069 | .542 | -.020    | -.078|
| da6      | 3.000| 8.000| -.034| -.267| -.217    | -.852|
| da5      | 3.000| 9.000| .003 | .025 | -.213    | -.837|
| da4      | 3.000| 8.000| -.020| -.154| -.446    | -1.752|
| da3      | 3.000| 8.000| -.065| -.509| -.409    | -1.609|
| da2      | 2.000| 8.000| -.205| -1.612| .005     | .020 |
| da1      | 3.000| 8.000| -.231| -1.820| -.099    | -.391|
| Multivariate |     |      |      |      | -2.577 | -.566 |
For models with good fit, chi-square normalised by degrees of freedom (Chisq/df) should be less than 5.0 (Bentler 1990; Bhattacherjee 2001), Comparative Fit Index (CFI), Goodness Fit Index (GFI), Tucker-Lewis Index (TLI), and Normal Fit Index (NFI) should all be greater than 0.90 [7, 9, 40], and Root Mean Square of Error Approximation (RMSEA) should be less than 0.08 [31, 50]. For the current model, it’s achieved all the requirement indices (Chisq/df = 1.144; RMSEA = 0.020; CFI = 0.991; GFI = 0.991; TLI = 0.991; NFI = 0.936) and concluded it appropriate for the next step (Fig. 3 and Table 2).

When Talent Supply goes up by 1, Government Support goes up by 0.048. The regression weight estimate obtained is 0.048, and a standard error of about .024. Dividing the regression weight estimate by the estimate of its standard error gives \( z = \frac{0.048}{0.024} = 1.984 \). In other words, the regression weight estimate is 1.984 standard errors above zero.

The probability of getting a critical ratio as large as 1.984 in absolute value is .047. In other words, the regression weight for Talent Supply in the prediction of Government Support is significantly different from zero at the 0.05 level (two-tailed). When Talent Supply, Talent Demand, and Government Support) are imposed on the endogenous construct (Talent Shortage). To test this constructed relationship that the single arrow is chosen to represent a causal effect; that is, this must begin from the exogenous construct to the endogenous construct.

![Unstandardized structural model of talent shortage](image)

**Fig. 2.** Unstandardized structural model of talent shortage
Table 2. Regression weight for supply and demand in predicting shortage with government support as mediator

| Path constructs                | Estimate | S.E.  | C.R.   | P      | Results   |
|-------------------------------|----------|-------|--------|--------|-----------|
| Government support ← Talent supply | 0.048    | 0.024 | 1.984  | 0.047  | Significant |
| Government support ← Talent demand | 0.600    |       |        |        | Significant |
| Talent shortage ← Talent supply | 0.350    | 0.065 | 5.371  | ***    | Significant |
| Talent shortage ← Talent demand | −0.350   | 0.053 | −6.604 | ***    | Significant |
| Talent shortage ← Government support | 1.000    |       |        |        | Significant |

Demand goes up by 1, Government Support goes up by 0.6. This regression weight was fixed at 0.600, not estimated.

When Talent Supply goes up by 1, Talent Shortage goes up by 0.35. The regression weight estimate obtained is 0.350, has a standard error of about 0.065. Dividing the regression weight estimate by the estimate of its standard error gives $z = \frac{0.350}{0.065} = 5.371$. In other words, the regression weight estimate is 5.371 standard errors above zero. The probability of getting a critical ratio as large as 5.371 in absolute value is less...
than 0.001. In other words, the regression weight for Talent Supply in the prediction of Talent Shortage is significantly different from zero at the 0.001 level (two-tailed).

When Talent Demand goes up by 1, Talent Shortage goes down by 0.35. The regression weight estimate, $-0.35$, has a standard error of about $0.053$. The regression weight estimate, $-0.350$, has a standard error of about $0.053$. Dividing the regression weight estimate by the estimate of its standard error gives $z = -0.350 / 0.053 = -6.604$. In other words, the regression weight estimate is 6.604 standard errors below zero.

The probability of getting a critical ratio as large as 6.604 in absolute value is less than 0.001. In other words, the regression weight for Talent Demand in the prediction of Talent Shortage is significantly different from zero at the 0.001 level (two-tailed). When Government Support goes up by 1, Talent Shortage goes up by 1. This regression weight was fixed at 1.000, not estimated.

### 5.3 Mediator Testing

First of all, obtain the standardised regression weights and the probability values, which indicate the significance of the respective path (Table 3).

| Path constructs                         | Estimate | P   | Results |
|-----------------------------------------|----------|-----|---------|
| Government support $\rightarrow$ Talent supply | 0.071    | 0.05| Significant |
| Talent shortage $\rightarrow$ Government support | 0.705    | 0.01| Significant |
| Talent shortage $\rightarrow$ Talent supply | 0.363    | 0.01| Significant |

To know mediation occur or not there two effect testing requires, that are indirect and direct effect testing. Indirect Effect $= 0.071$ (Talent Supply $\rightarrow$ Government Support) X $0.705$ (Government Support $\rightarrow$ Talent Shortage) $= 0.05 <$ direct effect $0.363$ (Talent Supply $\rightarrow$ Talent Shortage). Since indirect effect $>$ direct effect the no mediation occurs [3] (Figs. 4, 5 and Table 4).

Next to test second mediation effect path for Talent Demand $\rightarrow$ Government Support $\rightarrow$ Talent Shortage. The test of path effect of mediations as follows, Indirect Effect $= 0.967$ (Talent Demand $\rightarrow$ Government Support) X $0.705$ (Government Support $\rightarrow$ Talent Shortage) $= 0.681 >$ direct effect $0.398$ (Talent Demand $\rightarrow$ Talent Shortage). Since indirect effect $<$ direct effect the mediation occurs. Type of mediation of this path is partial mediation since the direct effect is still significant after the mediator enters the model [2].
Table 4. The standardize regression weight and its significant for each path for talent demand

| Path constructs                      | Estimate | P  | Results     |
|--------------------------------------|----------|----|-------------|
| Government support ← Talent demand   | .967     | .01| Significant |
| Talent shortage ← Government support | .705     | .01| Significant |
| Talent shortage ← Talent demand      | .398     | .01| Significant |

6 Conclusion

Overall the study has achieved its ultimate objective that is to develop a model for talent shortage. This model has met all the prerequisite to executing SEM for this study, such as validity, normality, and fitness index. By doing so, this model has achieved the confirmatory value to generalise among the population of the study. Apart from that, all the hypothesises H1, H2, H3, and H5 have been supported. While H4 hypothesis not supported and null hypothesis supported. On that part, from the theoretical standpoint and theory building, this study has contributed towards the work on talent shortage modelling among graduates.

Talent demand factor was founded to be more significantly competitive towards talent shortage compared to talent supply. As it indicated that, the higher increment factor of talent supply, the talent shortage factor would be increased. The result indirectly informs
that the talent currently reluctant to be an entrepreneur, as the talent preferer monthly salary generation compare to business type generate of income. They believe it is hard to handle the business nowadays since there is limited capital among them to start up the business. Other than that, the talent could not find a career path in the business as it would make them lost away while doing the business. Which mean, the talent majority available do not want to enter the entrepreneurial world due to not ready even though they have been equipped with entrepreneur skills and curriculum.

However, talent demand provides a contradict finding, higher contribution of talent demand factor, talent shortage will decrease. Thus, talent demand encompasses the structure of the organization or ecosystem in entrepreneurship. The attribute provides by the entrepreneur or organization could furnish the talent shortage due to benefited gain by the talent in the organization or entrepreneurship. Apart from that, the government factor does play a role in talent demand. The government itself part of the ecosystem in developing the talent and build proper entrepreneurship ecosystem. The contribution of government may come from the policy favouritism towards entrepreneur, infrastructure, monetary funding, ease of business access, and fundamental curriculum development.

In summary, this model able to provide significant information toward a talent shortage in the nation, especially in entrepreneurship talent ecosystem. Furthermore, in the extent of the context of the study under talent, the diversified of the respondent could be tested, including with the different industry as it will generate a different perspective of the generation of finding.

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