# PRIORITIZING ISSUES OF MALAYSIAN VISION 2020: AN APPLICATION OF THE ANALYTIC HIERARCHY PROCESS AND QUALITY FUNCTION DEPLOYMENT

Rafikul Islam<sup>a</sup> and Yusof Ismail<sup>b</sup>

<sup>a</sup>Department of Business Administration, Kulliyyah of Economics and Management Sciences, International Islamic University Malaysia, P.O. Box 10, 50728 Kuala Lumpur, Malaysia. (Email: rislam@iium.edu.my) <sup>b</sup>Department of Business Administration, Kulliyyah of Economics and Management Sciences, International Islamic University Malaysia, P.O. Box 10, 50728 Kuala Lumpur, Malaysia. (Email: yusof@iium.edu.my)

# ABSTRACT

The objectives of this research are to obtain the people's perception towards a number of issues pertaining to the realization of Malaysian Vision 2020, to rank the challenges of Vision 2020 and to collect suggestions to expedite the realization of the vision. Based on a nationwide survey, an affinity diagram was formed and the Analytic Hierarchy Process (AHP) was applied to identify the main issues for implementation. Furthermore, the Quality Function Deployment (QFD) model was utilized to show the strength of relationships between the various challenges of Vision 2020 and twenty categories of suggestions obtained in the survey. The respondents were also asked to rank the nine strategic challenges of Vision 2020, and the results show the three most crucial Vision 2020 challenges: 'Establishing a fully moral and ethical society', 'Establishing a united Malaysian nation made up of one Bangsa Malaysia (Malaysian nation)', and 'Creating a psychologically liberated, secure and developed Malaysian society'. The AHP prioritization process also identifies the salient public suggestions. The findings suggest that the government machinery should keep the public better informed of the issues, improve their perceptions and solicit their contributions. Since this study focuses on urban respondents with higher educational qualifications, future studies should focus on those in rural areas. As the government needs to be aware of the public feedback on the issue, this survey has managed to identify what are lacking in the government's efforts and what more need to be done in order to expedite the realization of Vision 2020.

JEL Classification: O10, O20, H11

Key words: Vision 2020, Prioritization, Analytic Hierarchy Process, Quality Function Deployment, Malaysia

#### 1. INTRODUCTION

Vision is a long-term objective that provides an insight into the future direction, which a nation/organization needs to move, just as an identified destination gives a direction to a journey. A well-defined vision gives focus and direction to the formulation of current programs and in turn links current actions to the achievement of future goals. Malaysian Vision 2020 was unveiled by the former Prime Minister of Malaysia, Tun Dr. Mahathir bin Mohamad at the inaugural meeting of the Malaysian Business Council on the 28th of February, 1991. The Malaysian cabinet approved the vision unanimously and mandated for an immediate national conference, which took place in December, 1991. A pool from the country's intelligentsia participated in this conference and shared their positive views and optimism on the realization of Vision 2020 and it became a national vision soon after. Till date, a number of books have been written and numerous seminars/ exhibitions have been organized to cascade the vision down to the populace (Sarji, 1993; Yeoh, 1993; Sarji, 1996). Above all, the present government that comes from the same political party as the former Prime Minister, is fully supportive of the vision and works diligently for its realization.

The gist of this vision is to see Malaysia as a fully developed country.<sup>1</sup> The Vision 2020 statement is:

"By the year 2020, Malaysia is to be a united nation, with a confident Malaysian society, infused by strong moral and ethical values, living in a society that is democratic, liberal, caring, economically just and equitable, progressive and prosperous, and in full possession of an economy that is competitive, dynamic, robust and resilient," (Rahman, 1993).

In a National Seminar held in 1991, the then Deputy Prime Minister of Malaysia, Tun Abdul Ghafar Baba, stressed Malaysia should not only be developed economically, but also in all dimensions including political, social, spiritual, psychological as well as cultural. More importantly, in the efforts towards a developed status, Malaysia should also endeavor to create a united, confident, socially just and politically stable Malaysian society in which everybody has a place and takes pride in being a Malaysian.<sup>2</sup> In short, Vision 2020 (henceforth referred to as V-2020 for brevity) reflects the vision of a fully developed and industrialized Malaysia by the year 2020, in all dimensions. Tun Mahathir Mohamad also stated this as follows (Mohamad, 1991): "Malaysia should not be developed only in the economic sense. It must be a nation that is fully developed along all the dimensions: economically, politically, socially, spiritually, psychologically and culturally. We must be fully developed in terms of national unity and social cohesion, in terms of our economy, in terms of social justice, political stability, system of government, quality of life, social and spiritual values, national pride and confidence."

The Specific objectives of V-2020 are as follows:

- To have sufficient food and shelter with easy access to health and basic essentials.
- To eradicate poverty.
- To remove the identification of race with major economic functions and to have a fair distribution with regard to the control, management and ownership of the modern economy.
- To maintain annual population growth rate of 2.5%.
- To double real GDP every ten years between 1990 and 2020.
- To have a balanced growth in all sectors namely: industry, agroforestry, energy, transport, tourism and communications, banking, that is technologically proficient, fully able to adapt, innovative, with a view to always moving to higher levels of technology.

From the above, it is clear that the focus of V-2020 is not only on the economic aspects of development but also on the interrelated aspects such as social justice, quality of life, moral and ethical values, work ethics and so on (Kassim, 1993). To achieve the various objectives of V-2020, the former PM identified nine strategic challenges and according to him, if these challenges are successfully addressed, then Malaysia will be able to realize the objectives of V-2020. The nine challenges are:

- i. Establishing a united Malaysian nation made up of one *Bangsa Malaysia* (Malaysian nation)
- ii. Creating a psychologically liberated, secure, and developed Malaysian society.
- iii. Fostering and developing a mature democratic society.
- iv. Establishing a fully moral and ethical society.
- v. Establishing a mature, liberal and tolerant society.
- vi. Establishing a scientific and progressive society.
- vii.Establishing a fully caring society.

viii.Ensuring an economically just society, in which there is fair and

equitable distribution of wealth of the nation.

ix. Establishing a prosperous society with an economy that is fully competitive, dynamic, robust and resilient.

V-2020 is a buzz word in Malaysia and the government is keen to achieve this lofty vision. However, when we talk to the public about this, they are, in general, of the opinion that many more things need to be done before the nation achieves the vision. A formal questionnaire was developed to know the present level of achievement. Specifically, the objectives of the present research are to obtain the people's perception towards a number of issues pertaining to the realization of V-2020, to rank the challenges of V-2020 and to collect suggestions that can expedite the realization of the vision. The details are provided in the following sections.

## 2. PUBLIC OPINION ON REALIZATION OF V-2020

We have been able to contact 759 people in Malaysia for the purpose of obtaining feedback through a questionnaire. All the people were contacted personally. Since the survey is on the national vision, the respondents contacted belonged to all the states of Malaysia. In fact, we, together with our nominated research assistants visited all the 13 states of Malaysia and the federal territory of Kuala Lumpur to obtain the feedback. The details of the demographic information are provided in Table 1.

Gender       417       54.9         Female       342       45.1         Race	Variable*	Frequency	Percent
Female       342       45.1         Race	Gender		
Race       7.2         Malay       510       67.2         Chinese       82       10.8         Indian       61       8.0         Others       106       14.0         Age group       23       3.0         21-30 years       375       49.4         31-40 years       204       26.9         41-50 years       99       13.0         Above 50 years       57       7.5         Highest level of education       0       13.2         Professional       38       5.0         Bachelors       353       46.5         Masters       120       15.8         Ph.D.       59       7.8         Others       41       5.4         Married       395       52.0         Divorced       4       0.5         Type of employment       700       44         Public       269       35.4         Private       289       38.1         Self-employed       61       8.0	Male	417	54.9
Malay       510 $67.2$ Chinese       82       10.8         Indian       61       8.0         Others       106       14.0         Age group       23       3.0         20 years or below       23       3.0         21-30 years       375       49.4         31-40 years       204       26.9         41-50 years       99       13.0         Above 50 years       57       7.5         Highest level of education       0       13.2         Professional       38       5.0         Bachelors       353       46.5         Masters       120       15.8         Ph.D.       59       7.8         Others       41       5.4         Marital status       357       47.0         Married       395       52.0         Divorced       4       0.5         Type of employment       7       7         Public       269       35.4         Private       289       38.1         Self-employed       61       8.0	Female	342	45.1
Chinese       82       10.8         Indian       61       8.0         Others       106       14.0         Age group       23       3.0         21-30 years       375       49.4         31-40 years       204       26.9         41-50 years       99       13.0         Above 50 years       57       7.5         Highest level of education       0       13.2         O Level       28       3.7         A Level       17       2.2         Diploma       100       13.2         Professional       38       5.0         Bachelors       353       46.5         Masters       120       15.8         Ph.D.       59       7.8         Others       41       5.4         Marital status       395       52.0         Divorced       4       0.5         Type of employment       70.0         Public       269       35.4         Private       289       38.1         Self-employed       61       8.0	Race		
Indian       61       8.0         Others       106       14.0         Age group       23       3.0         21-30 years or below       23       3.0         21-30 years       375       49.4         31-40 years       204       26.9         41-50 years       99       13.0         Above 50 years       57       7.5         Highest level of education       0       13.2         O Level       28       3.7         A Level       17       2.2         Diploma       100       13.2         Professional       38       5.0         Bachelors       353       46.5         Masters       120       15.8         Ph.D.       59       7.8         Others       41       5.4         Marital status       395       52.0         Divorced       4       0.5         Type of employment       70         Public       269       35.4         Private       289       38.1         Self-employed       61       8.0			67.2
Others       106       14.0         Age group       23       3.0         20 years or below       23       3.0         21-30 years       375       49.4         31-40 years       204       26.9         41-50 years       99       13.0         Above 50 years       57       7.5         Highest level of education       0       13.2         O Level       28       3.7         A Level       17       2.2         Diploma       100       13.2         Professional       38       5.0         Bachelors       353       46.5         Masters       120       15.8         Ph.D.       59       7.8         Others       41       5.4         Marital status       52.0         Divorced       4       0.5         Type of employment       7         Public       269       35.4         Private       289       38.1         Self-employed       61       8.0	Chinese		10.8
Age group233.020 years or below233.021-30 years37549.431-40 years20426.941-50 years9913.0Above 50 years577.5Highest level of educationO Level283.7A Level172.2Diploma10013.2Professional385.0Bachelors35346.5Masters12015.8Ph.D.597.8Others415.4Marital status39552.0Divorced40.5Type of employment $V$ Public26935.4Private28938.1Self-employed618.0	Indian		
20 years or below       23 $3.0$ 21-30 years $375$ $49.4$ $31-40$ years $204$ $26.9$ $41-50$ years $99$ $13.0$ Above 50 years $57$ $7.5$ Highest level of education $0$ $28$ $3.7$ $0$ Level $28$ $3.7$ $7.5$ Highest level of education $0$ $13.2$ $0$ Level $17$ $2.2$ $0$ Diploma $100$ $13.2$ Professional $38$ $5.0$ Bachelors $353$ $46.5$ Masters $120$ $15.8$ Ph.D. $59$ $7.8$ Others $41$ $5.4$ Marital status $395$ $52.0$ Divorced $4$ $0.5$ Type of employment $ -$ Public $269$ $35.4$ Private $289$ $38.1$ Self-employed $61$ $8.0$	Others	106	14.0
21-30 years $375$ $49.4$ $31-40$ years $204$ $26.9$ $41-50$ years $99$ $13.0$ Above 50 years $57$ $7.5$ Highest level of education $28$ $3.7$ O Level $28$ $3.7$ A Level $17$ $2.2$ Diploma $100$ $13.2$ Professional $38$ $5.0$ Bachelors $353$ $46.5$ Masters $120$ $15.8$ Ph.D. $59$ $7.8$ Others $41$ $5.4$ Marital status $357$ $47.0$ Married $395$ $52.0$ Divorced $4$ $0.5$ Type of employment $-$ Public $269$ $35.4$ Private $289$ $38.1$ Self-employed $61$ $8.0$	Age group		
31-40 years $204$ $26.9$ $41-50$ years99 $13.0$ Above 50 years577.5Highest level of education $28$ $3.7$ O Level28 $3.7$ A Level17 $2.2$ Diploma100 $13.2$ Professional38 $5.0$ Bachelors $353$ $46.5$ Masters120 $15.8$ Ph.D.59 $7.8$ Others41 $5.4$ Marital status $357$ $47.0$ Married $395$ $52.0$ Divorced4 $0.5$ Type of employment $-$ Public $269$ $35.4$ Private $289$ $38.1$ Self-employed $61$ $8.0$	20 years or below	23	3.0
41-50 years       99       13.0         Above 50 years       57       7.5         Highest level of education       28       3.7         O Level       28       3.7         A Level       17       2.2         Diploma       100       13.2         Professional       38       5.0         Bachelors       353       46.5         Masters       120       15.8         Ph.D.       59       7.8         Others       41       5.4         Marital status       52.0       52.0         Divorced       4       0.5         Type of employment       269       35.4         Private       289       38.1         Self-employed       61       8.0	21-30 years	375	49.4
Above 50 years       57       7.5         Highest level of education       28       3.7         O Level       28       3.7         A Level       17       2.2         Diploma       100       13.2         Professional       38       5.0         Bachelors       353       46.5         Masters       120       15.8         Ph.D.       59       7.8         Others       41       5.4         Marital status       57       47.0         Married       395       52.0         Divorced       4       0.5         Type of employment       7       7         Public       269       35.4         Private       289       38.1         Self-employed       61       8.0		204	26.9
Highest level of education       28 $3.7$ O Level       28 $3.7$ A Level       17 $2.2$ Diploma       100 $13.2$ Professional       38 $5.0$ Bachelors $353$ $46.5$ Masters       120 $15.8$ Ph.D. $59$ $7.8$ Others       41 $5.4$ Marital status $395$ $52.0$ Divorced       4 $0.5$ Type of employment $-$ Public $269$ $35.4$ Private $289$ $38.1$ Self-employed $61$ $8.0$	41-50 years	99	13.0
O Level       28       3.7         A Level       17       2.2         Diploma       100       13.2         Professional       38       5.0         Bachelors       353       46.5         Masters       120       15.8         Ph.D.       59       7.8         Others       41       5.4         Marital status       395       52.0         Divorced       4       0.5         Type of employment       7       7         Public       269       35.4         Private       289       38.1         Self-employed       61       8.0	Above 50 years	57	7.5
A Level       17       2.2         Diploma       100       13.2         Professional       38       5.0         Bachelors       353       46.5         Masters       120       15.8         Ph.D.       59       7.8         Others       41       5.4         Marital status       395       52.0         Divorced       4       0.5         Type of employment	Highest level of education		
Diploma       100       13.2         Professional       38       5.0         Bachelors       353       46.5         Masters       120       15.8         Ph.D.       59       7.8         Others       41       5.4         Marital status       395       52.0         Divorced       4       0.5         Type of employment	O Level	28	3.7
Professional       38       5.0         Bachelors       353       46.5         Masters       120       15.8         Ph.D.       59       7.8         Others       41       5.4         Marital status       557       47.0         Married       395       52.0         Divorced       4       0.5         Type of employment       7         Public       269       35.4         Private       289       38.1         Self-employed       61       8.0	A Level	17	2.2
Bachelors       353       46.5         Masters       120       15.8         Ph.D.       59       7.8         Others       41       5.4         Marital status       557       47.0         Married       395       52.0         Divorced       4       0.5         Type of employment       7         Public       269       35.4         Private       289       38.1         Self-employed       61       8.0			13.2
Masters       120       15.8         Ph.D.       59       7.8         Others       41       5.4         Marital status	Professional	38	5.0
Ph.D.       59       7.8         Others       41       5.4         Marital status	Bachelors		46.5
Others       41       5.4         Marital status       357       47.0         Single       357       47.0         Married       395       52.0         Divorced       4       0.5         Type of employment	Masters		
Marital status         Single       357       47.0         Married       395       52.0         Divorced       4       0.5         Type of employment	Ph.D.	59	7.8
Single       357       47.0         Married       395       52.0         Divorced       4       0.5         Type of employment	Others	41	5.4
Married         395         52.0           Divorced         4         0.5           Type of employment	Marital status		
Married         395         52.0           Divorced         4         0.5           Type of employment		357	47.0
Type of employmentPublic26935.4Private28938.1Self-employed618.0	-	395	52.0
Public         269         35.4           Private         289         38.1           Self-employed         61         8.0	Divorced	4	0.5
Public         269         35.4           Private         289         38.1           Self-employed         61         8.0	Type of employment		
Private         289         38.1           Self-employed         61         8.0		269	35.4
Self-employed 61 8.0			
		133	17.5

# TABLE 1 Respondents' Demographic Information.

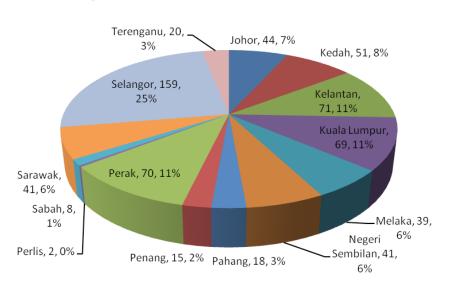
Note: \* Missing entries are not included in the numerical figures.

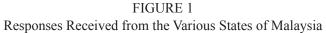
Malaysia is a multiracial country. In addition to this, the country's total population consists of a sizable percentage of foreigners, who belong to mainly three categories: students, professionals, and workers. We were also interested to know their views on the nation's aspiration to become developed and how far the country has progressed. However, we considered only the professionals from among the foreigners for obtaining the feedback. The statistics of the respondents across various states of Malaysia and the world are provided in Table 2. It is to be noted that out of 759 respondents, 106 are foreigners belonging to 28 countries (the list of countries are arranged alphabetically starting and ending with Afghanistan and Zimbabwe, respectively. Further, not all the respondents mentioned their state or nationality in the questionnaire.).

TA	BL	Æ	2
----	----	---	---

Statistics of Respondents Across Various States of Malaysia and the World

Malay	sian		Interna	ational	
State	No. of respondents	Country	No. of respondents	Country	No. of respondents
Johor	44	Afghanistan	1	Oman	1
Kedah	51	Albania	1	Pakistan	6
Kelantan	71	Algeria	3	Saudi Arabia	6
Kuala Lumpur	69	Bangladesh	15	Senegal	1
Melaka	39	China	2	Singapore	1
Pahang	18	Egypt	2	Somalia	1
Penang	15	Ghana	1	Sri Lanka	1
Perak	70	India	6	Sudan	1
Perlis	2	Indonesia	14	Tanzania	1
Sabah	8	Iran	2	Tunisia	1
Sarawak	41	Kenya	1	Turkey	1
Selangor	159	Malawi	1	Uganda	2
Negeri Sembilan	41	Maldives	2	Yemen	1
Terengganu	20	Nigeria	2	Zimbabwe	1





The number and percentages of the respondents who provided feedback from various states of Malaysia are also shown by means of a pie chart (see Figure 1). As shown, the highest number of respondents are drawn from the state of Selangor (the most developed state in Malaysia<sup>3</sup>) followed by Kelantan, Perak and Kuala Lumpur.

After providing the demographic information, the respondents were asked seven 'Yes/No' type of questions. The frequency distribution of the responses is provided in Table 3. A number of observations can be made from these responses. More than 50% of the respondents either said 'No' or 'Not sure' on whether Malaysia can achieve the status of developed nation by 2020. However, proportional hypothesis test does not confirm that the minority said 'Yes' (p = 0.1583). Therefore, the responses on the question is evenly distributed between 'Yes' and 'No and Not Sure'.

Question	Yes	No	Not Sure
Do you think that Malaysia can achieve the status of	366	118	262
developed nation by 2020?	(48.2)	(15.5)	(34.5)
Do you think that the initiatives from the government to	190	315	239
achieve the status of developed nation are enough?	(25.0)	(41.5)	(31.5)
Do you think that the initiatives from the government	252	238	255
to achieve the status of developed nation are working	(33.2)	(31.4)	(33.6)
properly?			
Is the cooperation of the people with the government to	198	342	205
achieve developed nation sufficient?	(26.1)	(45.1)	(27.0)
Do you think that the present education system in Malaysia	219	369	158
is able to prepare the nation to be developed by 2020?	(28.9)	(48.6)	(20.8)
Is the human resource skilled enough and ready to take	153	407	187
challenges to achieve the targets of a developed nation by	(20.2)	(53.6)	(24.6)
2020?			
Are the monitoring agencies active enough to monitor the	135	313	297
progress pertaining to all the challenges of vision 2020?	(17.8)	(41.2)	(39.1)

# TABLE 3

## Analysis of People's Responses Against Yes/No Type of Questions

In the remaining six questions, the majority of the respondents answered in the negative. In particular, the respondents do not think that:

- The initiatives taken by the government to achieve the status of a developed nation are enough.
- The initiatives taken by the government to achieve the status are working properly.
- The cooperation of the people with the government to achieve developed nation is sufficient.
- The present education system in Malaysia is able to prepare the nation to be developed by 2020.
- The human resource is skilled enough and ready to take challenges to achieve the targets of a developed nation by 2020.
- The monitoring agencies are active enough to monitor the progress pertaining to all the challenges of vision 2020.

The high percentages of responses under the column 'Not Sure' are noteworthy. About 39% (highest percentage under 'Not Sure' category) of the respondents are not aware about the existence of any agencies that monitor the progress of achieving the status. We also find that 53.6% (overall highest percentage) of the respondents do not think that the country's human resource is skilled enough and ready to take the challenges of V-2020.

### 3. RANKING OF CHALLENGES OF V-2020

Mahathir Mohamad (Mohamad, 1991) said:

"There can be no fully developed Malaysia until we have finally overcome the nine central strategic challenges that have confronted us from the moment of our birth as an independent nation."

In fact, the nine strategic challenges and Malaysian Vision 2020 are inseparable from one another. However, not all challenges of V-2020 are usually regarded as equally important. The respondents were asked to rank the challenges according to their perceived importance. The most perceived important one is to be assigned rank 1, the second most the rank 2, etc. After collecting all the ranks assigned by them, arithmetic means were computed and these are shown in the second column of Table 4. As per the assignment of the ranks, the lower the mean value, the higher is the importance. Based upon this premise, the ordinal ranks of the challenges are determined and shown in the table.

It should be noted that the overall ranks of the challenges are determined on the basis of the mean values, which in turn, have been computed on the individual ranks assigned by the respondents. The objective was not to identify the significant differences among the mean values, rather to order them in accordance of their perceived importance. Nevertheless, a statistical test has been performed on the mean values corresponding to the individual challenges with regards to various demographic variables (see Section 4).

Challenge	Mean Rank (cardinal)	Std Dev.	Mean Rank (ordinal)	Weight*
Establishing a united Malaysian nation made up of one <i>Bangsa Malaysia</i> (Malaysian nation)	4.383	3.201	2	0.178
Creating a psychologically liberated, secure and developed Malaysian society	4.896	2.358	3	0.156
Fostering and developing a mature democratic society	4.912	2.366	4	0.133
Establishing a fully moral and ethical society	4.037	2.392	1	0.200
Establishing a mature, liberal and tolerant society	5.203	2.140	6	0.089
Establishing a scientific and progressive society	5.578	2.239	8	0.044
Establishing a fully caring society	5.686	2.474	9	0.022
Ensuring an economically just society, in which there is fair and equitable distribution of wealth of the nation	4.925	2.647	5	0.111
Establishing a prosperous society with an economy that is fully competitive, dynamic, robust and resilient	5.346	2.806	7	0.067

# TABLE 4 Ranking of Challenges of V-2020

Note: \* Based upon ordinal mean ranks.

The three most important challenges are found to be:

- Establishing a fully moral and ethical society.
- Establishing a united Malaysian nation made up of one Bangsa Malaysia (Malaysian nation).
- Creating a psychologically liberated, secure, and developed Malaysian society.

It should also be noted that, economic challenge (challenge number 9) is not ranked one, contrary to what one might initially think. In fact, this has been assigned overall rank 7. Perhaps the country's concern on crime rate, problems related to morality (albeit in certain cases) and fragile unity among various races are the underlying reasons for this finding. In fact, the former Prime Minister Tun Dr. Mahathir, in one of his speeches, mentioned that he would be surprised if Malaysia does not consider the challenge of establishing a united Malaysian nation as the most crucial one (Mohamad, 1991). It is interesting to note that the present Prime Minister, Dato' Seri Najib Tun Razak's national slogan is "1 Malaysia" (Razak, 2009). This is reasonable and expected as unity is an antecedent for any kind of development in a multi-racial country like Malaysia.

Cardinal weights (where sum equals to unity) of the challenges are determined from their mean ordinal ranks by using the following formula:

$$w_i = \frac{n - r_i + 1}{\sum\limits_i (n - r_i + 1)}$$

where n = number of challenges, and  $r_i =$  rank of the  $i^{th}$  challenge. The weights are shown in the last column of Table 4. The purpose of obtaining these weights is to use them later into the Quality Function Deployment (QFD) framework (see Section 6).

Table 5 provides the frequencies of the ranks of the five most important challenges. As we observe, 227 respondents (29.9%, overall largest percentage) ranked 'Establishing a united Malaysian nation' as the number of one challenge, though overall the challenge holds 2<sup>nd</sup> rank. It is also observed that those who did not rank this challenge as number one, they put it in a considerably low rank. In fact, 130 (17.1%) respondents assigned 9<sup>th</sup> rank (rank 9 is not shown in Table 5). Therefore, people are divided in terms of assigning ranks to this challenge. On the other hand, 'Establishing a fully moral and ethical society' has received a consistently higher rank; about 16.5% of the respondents' most critical challenge is this one. For the other three remaining challenges in Table 5, ranks are distributed evenly (especially for ranks 2<sup>nd</sup> through 5<sup>th</sup>).

 TABLE 5

 Frequency Distribution of the Five Most Important Challenges

Rank	$C_4$	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	$C_8$
1 <sup>st</sup>	125 (16.5)	227 (29.9)	52 (6.9)	44 (5.8)	74 (9.7)
$2^{nd}$	99 (13.0)	45 (5.9)	77 (10.1)	93 (12.3)	86 (11.3)
3 <sup>rd</sup>	80 (10.5)	44 (5.8)	87 (11.5)	73 (9.6)	88 (11.6)
$4^{th}$	87 (11.5)	49 (6.5)	80 (10.5)	84 (11.1)	55 (7.2)
5 <sup>th</sup>	70 (9.2)	40 (5.3)	81 (10.7)	86 (11.9)	72 (9.5)

**Solution Solution Solution** 

## 4. ANALYSIS OF RANKING OF THE CHALLENGES BASED ON DEMOGRAPHIC FACTORS

Table 4 has shown the overall ranking of all the nine challenges for all the respondents regardless of their demography. Table 6 provides the ranking of the same set of challenges based upon the demography of the respondents: gender, race, age, education, marital status and type of employment. As we observe, these individual ranks corroborate with the corresponding overall ranks. For example, the overall rank of  $C_1$  (i.e., Challenge 1) is 2, which is also the rank assigned by the majority of the respondents belonging to various levels of the demographic variables. Similar comments apply to all other challenges in terms of their overall and individual ranks.

For every pair of levels of various demographic variables, Spearman's rank correlation coefficients (RCC) have been computed and subsequently using SPSS version 16, a non-parametric hypothesis test has been performed to prove or disprove that the ranks are statistically same. The results are shown in Table 7. As we see the ranks are correlated for the majority of all possible pairs. The minimum and maximum RCCs are found to be 0.217 (Masters and PhD degree holders) and 0.955 (age groups 30-40 years and above 50 years). It is important to note that while ranking the challenges, people having different educational qualifications have differed significantly.

Table 7 shows the Spearman's rank correlation coefficients (RCCs) that have been computed considering all the challenges. However, high rank correlations do not mean that the respondents with regards to a particular demographic factor concur on the same rank for all the challenges. In fact, there are changes in ranks (see Table 6) for different levels of demographic variables as none of the RCCs is found to be unity. Therefore, with respect to various levels of a particular demographic variable, an attempt has been made to identify significant differences, if any, between the ranks of a specific V-2020 challenge.

Two-sample *t*-test has been performed for the demographic variables (eg., gender, marital status, employment status) which have only two levels, while for the variables having more than two levels (eg., race, age, education), one-way ANOVA has been performed. The details on the differences of ranks among various levels of the demographic variables are provided below.

39

**Gender:** No significant difference is found between males and females on any challenge of V-2020.

**Race:** Indians consider the challenge 'Establishing a united Malaysian nation' more important than Malays and Chinese do (in both cases p = 0.004). Indians also favor 'Developing a mature democratic community' more than Malays do (p = 0.004). On the other hand, Malays vote for 'Forming a community that has high morale, ethics, and religious strength' more than Indians (p = 0.022). Further, Chinese community prefer to assign more weight to 'Establishing a mature, liberal and tolerant society' compared to both Malays (p = 0.025) and Indians (p = 0.008). Finally, Malays consider 'Establishing a fully caring society' more important compared to Chinese (p = 0.019) and Indians (p = 0.045).

Age: High correlations are found between various levels of this variable, except one pair. The age group 30-40 years considers 'Establishing a scientific and progressive society' more important than the age group 40-50 years (p = 0.008) and above 50 years (p = 0.011).

**Education:** With respect to educational backgrounds, a number of differences are identified. Diploma (p = 0.001), Bachelors (p = 0.004) and PhD (p = 0.044) degree holders consider 'Establishing a united Malaysian nation' significantly more important compared to Masters degree holders. In fact, to the Masters holders, the challenge's rank is 8, where as, for the rest, the rank is either 1 or 2. Further, to the Diploma holders, 'Developing a mature democratic community' is more important than PhD holders (p = 0.021). On the other hand, Masters and PhD degree holders consider 'Forming a community that has high morale, ethics and religious strength' more critical compared to the Diploma holders. Finally, Masters degree holders assign more weight to 'Establishing a scientific and progressive society' compared to Diploma holders.

**Marital status:** Like gender, no significant difference is found between ranks assigned by married and unmarried respondents.

**Employment status:** Employees working in the private sector assigns more importance to 'Establishing a prosperous society with an economy that is fully competitive, dynamic, robust, and resilient' over their counterparts who are working in the public sector.

	Ranking of the Challenges based upon Respondents' Demographic Factors
--	---

Challenge	Gender	nder		Race				Age				Education	ation		Marita	Marital status	Emp	Employment type	type
	G	$G_2$	$\mathbb{R}_{_{1}}$	$\mathbb{R}_2$	$\mathbb{R}_3$	$\mathbf{A}_1$	$\mathbf{A}_2$	$\mathbf{A}_3$	$\mathbf{A}_4$	$\mathbf{A}_{5}$	$E_1$	$\mathrm{E}_2$	E <sub>3</sub>	$\mathrm{E}_4$	$\mathbf{M}_{1}$	$\mathbf{M}_2$	$W_1$	$W_2$	$W_3$
$C_1$	2	2	2	9	1	2	2	2	2	1	1	2	8	2	2	2	2	2	2
$C_2$	4	4	3	3	5	4	4	3	5	4	3	4	5	6	4	3	3	5	5
C <sub>3</sub>	З	5	5	2	2	9	ю	5	4	5	5	5	7	8	3	5	5	3	3
$C_4$	1	1	1	1	4	1	1	1	1	2	4	1	1	1	1	1	1	1	1
C,	9	9	9	4	7	7	6	7	8	7	6	6	3	5	9	7	9	7	4
C,	8	8	6	8	8	8	6	8	7	6	6	8	4	6	8	8	6	8	6
$C_7$	6	6	8	6	6	5	8	6	6	8	5	6	6	4	6	6	8	6	7
C <sub>s</sub>	5	3	4	7	3	3	5	4	3	3	7	3	2	3	5	4	4	4	9
C,	٢	7	٢	5	9	6	٢	9	9	9	8	7	9	7	7	9	7	9	8
<b>Notes:</b> $C_1 - C_9 = Nine challenges of V-2020$ ; $G_1 = Male$ , $G_2 = Female$ ; $R_1 = Malay$ , $R_2 = Chinese$ , $R_3 = Indian$ ; $A_1 = < 20$ years, $A_2 = 20-30$ years, $A_3 = 31-40$ years, $A_4 = 41-50$ years, $A_5 = >50$ years, $E_1 = Diploma$ , $E_2 = Bachelors$ , $E_3 = Masters$ , $E_4 = Ph.D$ ; $M_1 = Single$ , $M_2 = Married$ ; $W_1 = Public$ , $W_2 = 20-30$ years, $A_3 = 80$ , $M_2 = 1000$ ,	ne chal  -50 ye	llenges ars, A <sub>5</sub>	$\frac{1}{5} = 55$	2020; 0 year	$G_1 = N$ s; $E_1 =$	<u>Aale, C</u> = Diplo	$f_2 = F\epsilon$ ma, E	$\frac{1}{2} = Ba_{0}$	$R_1 = N$ chelor:	$Aalay, E_3 =$	$R_2 = C$ Maste	hinese. rs, E <sub>4</sub> =	, R <sub>3</sub> = I = Ph.D	ndian; ; M <sub>1</sub> =	$A_1 = <$ Single,	20  years M <sub>2</sub> = M	$A_2 = 2$	$0-30$ year $W_1 = Pub$	$s, A_3 =$ lic, $W_2 =$

Private,  $W_3 =$  Self-employed.

Spearman's Rank Correlation Coefficients Between Each Pair of Levels of Various Demographic Factors **TABLE 7** 

Gender		Race						~	Age				
$G_1G_2$	R <sub>1</sub> R <sub>2</sub>	$R_1R_3$	$R_2R_3$	$A_1A_2$	$A_1A_3$	$A_1A_4$	$A_1A_5$	$R_{1}R_{3} \left[ \begin{array}{c c} R_{2}R_{3} \end{array} \right] A_{1}A_{2} \left[ \begin{array}{c c} A_{1}A_{3} \end{array} \right] A_{1}A_{4} \left[ \begin{array}{c c} A_{1}A_{5} \end{array} \right] A_{2}A_{3} \left[ \begin{array}{c c} A_{2}A_{4} \end{array} \right] A_{2}A_{5} \left[ \begin{array}{c c} A_{3}A_{4} \end{array} \right] A_{3}A_{5} \left[ \begin{array}{c c} A_{4}A_{5} \end{array} \right] A_{4}A_{5} \end{array} \right]$	$A_2A_4$	$\mathbf{A}_2\mathbf{A}_5$	$A_{3}A_{4}$	$A_3A_5$	$\mathbf{A_4A_5}$
0.933**	0.633	0.767*	0.467	0.767*	0.767*	0.767* 0.467 0.767* 0.757* 0.733*	0.817**	0.817** 0.917** 0.867** 0.900** 0.933** 0.950** 0.917**	0.867**	0.900**	0.933**	0.950**	0.917**
		Education	ц			MS	н	Employment					
	$E_1E_3$	$E_1E_4$	$E_1E_4$ $E_2E_3$	$E_2E_4$	$\mathrm{E}_{3}\mathrm{E}_{4}$	$M_1M_2$	$E_3E_4$ $M_1M_2$ $W_1W_2$	W <sub>1</sub> W <sub>3</sub> W <sub>2</sub> W <sub>3</sub>	$W_2W_3$				
0.550 0	0.383	0.383	0.433	0.667	0.217	0.933**	0.900**	0.383 0.433 0.667 0.217 0.933** 0.900** 0.850** 0.817**	0.817**				
Correlati	ion is sign	nificant at	the 5% l	evel: ** (	Correlatic	n is signif	<b>Notes:</b> *Correlation is significant at the 5% level; ** Correlation is significant at the 1% level.	1% level.					

Duncan's multiple comparison test has also been performed. The purpose of this test is to identify the pair of levels for a demographic variable that differ significantly. Duncan's homogeneous subsets (for alpha = 0.05) are shown in Table 8. As expected, the previous observations are once again revealed in the test results. For example, on the importance of national unity, Indians and Malays belong to different sets.

Demographic factor	Challenge	Subse	ets for alpha = 0.0	5
		1	2	3
Race	C <sub>1</sub>	R <sub>3</sub>	R <sub>1</sub>	R <sub>1</sub> , R <sub>2</sub>
	C <sub>3</sub>	R <sub>3</sub> , R <sub>2</sub>	R <sub>2</sub> , R <sub>1</sub>	
	$C_4$	R <sub>1</sub>	R <sub>1</sub> , R <sub>2</sub>	R <sub>2</sub> , R <sub>3</sub>
	C <sub>5</sub>	R <sub>2</sub> , R <sub>1</sub>	R <sub>1</sub> , R <sub>3</sub>	
Qualification	$C_1$	$E_{1}, E_{2}, E_{3}$	$E_{1}, E_{2}, E_{3}, E_{4}$	
	$C_4$	E <sub>4</sub> , E <sub>3</sub>	$E_{4}, E_{3}, E_{2}$	$E_3, E_2$
	C <sub>7</sub>	E <sub>4</sub> , E <sub>1</sub> , E <sub>2</sub> , E <sub>3</sub>	E <sub>2</sub> , E <sub>3</sub>	
Age	C <sub>6</sub>	$\mathbf{A}_4, \mathbf{A}_3, \mathbf{A}_1, \mathbf{A}_2$	$A_1, A_2, A_5$	
Employment	$C_4$	W <sub>3</sub> , W <sub>1</sub>	W <sub>3</sub> , W <sub>1</sub> , W <sub>2</sub>	

# TABLE 8 Duncan's Multiple Comparison Test

#### 5. SUGGESTIONS FOR ACHIEVING V-2020

The main purpose of the questionnaire survey was to collect suggestions from the public to expedite the process of achieving the developed status. Seventy percent of the total of 759 respondents of the survey hold Bachelor's, Master's, or PhD degrees and can reasonably be assumed to possess a fair amount of knowledge about a developed nation and whether or not Malaysia fulfills the requirements of a developed nation. Further, the mass media are playing a pivotal role in educating the populace on the status of the economical and other kinds of development of the country.

As it was anticipated, the respondents touched upon a wide variety of issues and initially the suggestions were very unstructured. People were vocal about government responsibility, equitable distribution of wealth, preventing corruption and, of course, the ubiquitous issue of economy. Altogether 423 suggestions (some of them are mere comments) were received of which many are repeated a large number of times. For example, numerous people voiced out 'develop human capital', 'fair and equitable distribution of wealth', 'eliminate corruption', etc.

All the suggestions provided by the respondents are classified into 20 categories. The categorization process started with the identification of the suggestions that have 'affinity' among them and pertain to a central theme. For example, the common theme of the suggestions 'Ensure that the programs offered in the public and private universities are in the line with market need' and 'Education should not be only examination oriented' is "Education". So, these two suggestions were placed under Education category. Following this approach, the whole affinity diagram was developed. Thirteen of 20 categories possess a number of distinct items. An affinity diagram has been formed for these 13 categories (Figure 2). However, Islam (2005) commented that mere construction of an affinity diagram is not sufficient, rather one needs to prioritize the items within the components of the diagram in order to identify the items that deserve more attention.

The distinct items are singled out and used for prioritization by the AHP. In fact, to frame a distinct item, a few similar items have been combined. This does not only reduce the number of items but also makes it amenable to the application of AHP (Saaty, 2005). For example, under the category of 'Social Life', the suggestion 'Inculcate sharing and caring culture in the society' is actually an integrated form of the following suggestions:

- Culture of caring each other and respect others opinions.<sup>4</sup>
- As a Malaysian, (I) think it does not matter if we achieve a developed nation status successfully by 2020 unless we realize that the norm values among Malaysians, namely understanding and helping each other are more important in order to maintain and remain prosperous in the country forever.
- More caring, giving and taking.
- Malaysians should make their hearts as nice as good-hearted people.
- Everybody should support whatever has been done by Malaysia and think positive for every development.

## FIGURE 2

### The Affinity Diagram of V-2020

#### Corruption

CO<sub>1</sub>: Remove corrupt leaders

CO<sub>2</sub>: Eradicate corrupt practices

 $\overline{\text{CO}_3}$ : Stop bribery at all levels of the society

CO4: Replace 'know-who' by 'know-how' in awarding government projects

### Economy

EC<sub>1</sub>: Sustainable economic development

- EC<sub>2</sub>: Control of economy not by one nation but by Malaysian nation
- $EC_{3}^{2}$ : Elimination of poverty

 $EC_{4}$ : Zero unemployment

EC<sub>5</sub>: High level of per capita income

#### Education

 $ED_1$ : Ensure that the programs offered in the public and private universities are in the line with market need.

ED<sub>2</sub>: Equal opportunities of education for all races

 $ED_3$ : More creativity and innovation in education system

ED<sub>4</sub>: Enhance quality of education at the primary level

ED<sub>5</sub>: Education should not be only examination oriented

ED<sub>6</sub>: Develop excellent universities

 $ED_7$ : Improve academic system especially in the rural areas

Environment

EN<sub>1</sub>: Zero pollution

 $EN_2$ : Development without destroying the environment

#### Freedom of Expression

FE<sub>1</sub>: Press freedom

FE2: Public freedom of expression

#### Government Responsibility

GO<sub>1</sub>: Strong government with integrity and good governance

 $GO_2$ : Transparent government

GO<sub>3</sub>: Close cooperation between private and public sectors

GO<sub>4</sub>: Avoid bureaucracy

GO<sub>5</sub>: Appoint a monitoring agency to oversee meeting challenges of Vision 2020

GO<sub>6</sub>: Elect morally upright leaders in the government

 $GO_7$ : Change the mindset of politicians

GO<sub>8</sub>: Full democracy

Human Capital Development HC<sub>1</sub>: Develop more skilled workforce HC<sub>2</sub>: Develop right attitude among citizens HC<sub>2</sub>: Develop a morally upright society HC<sub>4</sub>: Malaysians should seek more knowledge and education HC<sub>s</sub>: People should possess more positive values such as punctuality, discipline, and commitment HC.: Open Malaysian mind to accept others' ideas and thinking Quality of Life QL<sub>1</sub>: Develop rural areas QL<sub>2</sub>: Improve public transportation including road infrastructure QL<sub>2</sub>: Improve public health-care facilities QL<sub>4</sub>: Improve telecommunication system R&D RD,: R&D in critical sectors in agriculture and industry RD<sup>2</sup>: Invite more scholars (from overseas) to contribute in R&D RD<sub>3</sub>: Recognize and encourage research in universities RD. Provide enough funds for R&D in technological areas and new product development Social Life SL<sub>1</sub>: Crime prevention SL<sub>2</sub>: Educate citizens to be more civic-conscious SL<sub>2</sub>: Inculcate sharing and caring culture in the society SL<sub>4</sub>: More freedom and no racism Technology TE<sub>1</sub>: Develop knowledge-based society TE<sub>2</sub>: Strong support for scientific development TE<sub>3</sub>: Import expertise and technology from abroad TE<sub>4</sub>: Achieve technology mastery Unbiased Practice UP<sub>1</sub>: Punishment for wrong doers regardless of their political or racial affiliation UP<sub>2</sub>: Involvement of all races in governmental decision making bodies UP<sub>2</sub>: Ensure all ethnic groups are equally treated UP<sub>4</sub>: Mutual help and cooperation among all Malaysians; no discrimination on the basis of race or religion Unitv UN<sub>1</sub>: Politicians should refrain from making ethnically discriminatory remarks UN<sub>a</sub>: Enhance national unity by eliminating ethnic discrimination

UN<sub>3</sub>: Improve racial understanding and tolerance

In order to prioritize the items within a category of the affinity diagram, AHP, which is independent of the frequency of the items obtained from the respondents, has been applied. The AHP prioritization process is considered a viable alternative to the frequency distribution as it is more focused and provides the relative standings of all the items belonging to a particular category in the affinity diagram by means of pair wise comparisons. Further, AHP is more elaborate and enriching, despite its being a time-consuming analytical process to gauge the respondents' viewpoints.

The prioritization process is applied in each category of the affinity diagram with the help of five experts (two academicians, two civil servants and one business man). The geometric mean aggregated prioritization matrices are formed and the numbers are maintained in the range (1/9, 9) by considering the nearest approximation of the respective geometric means. A set of sample AHP pairwise comparison matrices and the priorities of the items under each category are shown in Figure 3 and Table 9, respectively.

From the prioritization exercise, we identify the most important suggestions (selected only the first and second rank holders) under each category and these are shown below:

- Remove corrupt leaders (CO<sub>1</sub>)
- Eradicate corrupt practices (CO<sub>2</sub>)
- Eliminate poverty (EC<sub>3</sub>)
- Zero unemployment  $(EC_4)$
- Ensure that the programs offered in the public and private universities are in the line with market needs (ED<sub>1</sub>)
- Develop excellent universities (ED<sub>6</sub>)
- Develop without destroying the environment (EN<sub>2</sub>)
- Press freedom (FE<sub>1</sub>)
- Elect morally upright leaders in the government  $(GR_6)$
- Strong government with integrity and good governance (GR<sub>1</sub>)
- Develop morally upright society (HC<sub>3</sub>)
- Develop right attitude among citizens (HC<sub>2</sub>)
- Develop rural areas (QL<sub>1</sub>)
- Improve public health-care facilities (QL<sub>3</sub>)
- R&D in critical sectors in agriculture and industry (RD<sub>1</sub>)
- Recognize and encourage research in universities (RD<sub>3</sub>)
- Crime prevention  $(SL_1)$
- Develop knowledge-based society (TE<sub>1</sub>)
- Achieve technology mastery (TE<sub>4</sub>)
- Ensure that all ethnic groups are equally treated (UP<sub>3</sub>)
- Enhance national unity by eliminating discrimination (UN<sub>2</sub>)

Providing detailed accounts of all of the above suggestions is beyond the scope of this paper. Nevertheless, brief discussions on some of these are provided in Section 6.

## 6. RELATIONSHIP BETWEEN THE V-2020 CHALLENGES AND VARIOUS CATEGORIES OF SUGGESTIONS

In this section, we find out the strength of linkage between the various categories of suggestions and the various challenges of V-2020. This requires construction of a diagram that resembles house of quality (HoQ) in quality function deployment framework (Akao, 1990; Bossert, 1991). The diagram (which was developed with the involvement of the same people who took part in the prior AHP exercise) has been shown in Figure 4. Following the usual architecture of house of quality, we place the nine challenges (known as 'Whats') in the left part and the categories (known as 'Hows') in the top position of the diagram. The importance of the 'Whats' are put in the second last column. The main body of the HoQ diagram has been filled up by ascertaining the relationship between challenges and the categories. We have used the following weighting scheme to represent the relationship:

Relationship	Symbol	Weight
Very strong	O	9
Strong		6
Medium	0	3
Weak	0	1

The weights of the categories are determined by using the QFD formula:

$$r_j = \sum_{i=1}^9 c_i d_j$$

where  $r_j$  = weight of the *j*<sup>th</sup> category; j = 1, 2, ..., 20;  $c_i$  = weight of the *i*<sup>th</sup> challenge; i = 1, 2, ..., 9;  $d_{ij}$  = strength of relationship between *i*<sup>th</sup> challenge and *j*<sup>th</sup> category of items; i = 1, 2, ..., 9 and j = 1, 2, ..., 20.

The exercise provides the weights and hence the ranking (see second last row) of the categories of suggestions. The most important five categories are found to be:

- Government Responsibility
- Education

- Unity
- Spiritual Life
- Social Life

It should be noted that the category 'Spiritual Life' belongs to the set of the top five categories. This should not come as a surprise as it strongly related with three of the nine challenges ( $C_1$ ,  $C_4$ , and  $C_7$ ). Combining the results of the QFD and AHP exercises, we can recommend the following list of actions in order of priority to the relevant policy makers of the government of Malaysia:

- Elect morally upright leaders in the government.
- Strong government with integrity and good governance.
- Ensure that the programs offered in the public and private universities are in the line with market need.
- Develop excellent universities.
- Enhance national unity by eliminating discrimination.
- Enhance spiritual life of the public.
- Crime prevention.
- Ensure that all ethnic groups are equally treated.
- Strengthen family institution.
- Total involvement of everybody in the country to achieve the vision.
- Develop morally upright society.
- Develop right attitude among citizens.
- Uphold ethics and promote ethical behaviour in the society.
- Eliminate poverty.
- Zero unemployment.
- Remove corrupt leaders.
- Eradicate corrupt practices.
- Balanced development.
- Public awareness programs on V-2020.
- Press freedom.
- Develop rural areas.
- Improve public healthcare facilities.
- R&D in critical sectors in agriculture and industry.
- Recognize and encourage research in universities.
- Develop knowledge-based society.
- Achieve technology mastery.
- Benchmark with developed countries.
- Develop without destroying the environment.

FIGURE 3 A Sample of Completed AHP Pairwise Comparison Matrices

EC,	1/2	1/3	4	б		EN,	1/4	1		FE,	m	1	
$\mathrm{EC}_4$		1/5	б	1		EN				FE,			
EC,	1/4	1/6	1				EN	EN,			FE,	$FE_2$	
$\mathrm{EC}_{2}$	5	1				$ED_{7}$	m	1/2	1	1	1/4	5	
EC,	-					ED,		1/4	1/3	-	1/5	1	
	EC	$EC_2$	EC	EC	EC,	ED	5	1	5	б	1		
CO4	7	б	4	1		$ED_4$	m	1/3	1/2	1			
çõ	5	4	1			ED	4	1/2	-				
c0,	4	1				ED,	ю	-					
CO	-					ED							
	CO	CO2	CO	CO			ED	$ED_2$	ED	ED	ED	ED,	БD

НС	2	5	5	7	5	-		Γ	Γ								
HC	1/4		7	1/4	1			RD	ſ	1/3	ŝ	-	TE,	-		1/4	_
HC,	Э	5	5	-1				RD	6	, 1/3	1		Ē,	4	3	1	
HC	1/5	-	1										L				
HC,	1/5							RD	4				TE,	n.			
HC,	1							RD	-				TE,	-			
	HC	HC	HC	HC	HC	HC						-	_				_
								1	RD	Ę.Ą	RD	ß		TE,	TE,	TE	IE,
GR	7	72	0	-	'	S	$\frac{1}{2}$										
GR,	5	1/2	б	1/2	72	S	-			1 00	3		SL,	6	7	ς, τ	_
GR	1/3	1/5	1/4	1/7	1/7	-											
GŖ	7	-	б	1/3	1			D		1/2	1		SL	8	1/3	1	
GR,	5	ŝ	ŝ	1						ı —			SL,	7	-		
GR,	4	1/3	-										. 1				
GR	5							JC	<u>-</u>	•			SI				_
GR	1									Į Į				SL	SL,	SL <sup>3</sup>	SL <sup>4</sup>
	GR,	GR	GR	GR	GR	GR	GR,										-
	GR, GR, GR, GR, GR, GR, GR, GR, IC, HC, HC, HC, HC, HC,	GR         HC         HC	GR,         HC,         HC,	GR         GR         GR         GR         GR         GR         GR         GR         GR         HC         HC	GR         GR         GR         GR         GR         GR         GR         GR         GR         HC         HC	GR,         HC,         HC, <td><math display="block"> \begin{array}{ c c c c c c c c c c c c c c c c c c c</math></td> <td><math display="block"> \begin{array}{ c c c c c c c c c c c c c c c c c c c</math></td> <td><math display="block"> \begin{array}{c ccccccccccccccccccccccccccccccccccc</math></td> <td><math display="block"> \begin{array}{ c c c c c c c c c c c c c c c c c c c</math></td> <td><math display="block"> \begin{array}{ c c c c c c c c c c c c c c c c c c c</math></td> <td><math display="block"> \begin{array}{ c c c c c c c c c c c c c c c c c c c</math></td> <td><math display="block"> \begin{array}{ c c c c c c c c c c c c c c c c c c c</math></td> <td><math display="block"> \begin{array}{ c c c c c c c c c c c c c c c c c c c</math></td> <td><math display="block"> \begin{array}{ c c c c c c c c c c c c c c c c c c c</math></td> <td><math display="block"> \begin{array}{ c c c c c c c c c c c c c c c c c c c</math></td> <td><math display="block"> \begin{array}{ c c c c c c c c c c c c c c c c c c c</math></td>	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$

FIGURE 3 (Continued) Sample of Completed AHP Pairwise Comparison Ma N N

Ś

S

E.

UP,

UP.

N N N

2 %

UP<sub>3</sub> 1/4 1/3

UP<sub>2</sub>UP

Category	Items	Priorities	Consistency Ratio	Category	Items	Priorities	Consistency Ratio
Corruption	$\begin{array}{c} \mathrm{CO}_1 \\ \mathrm{CO}_2 \\ \mathrm{CO}_3 \\ \mathrm{CO}_4 \end{array}$	0.583 0.238 0.121 0.057	0.14	Economy	$\begin{array}{c} \mathrm{EC}_{1}\\ \mathrm{EC}_{2}\\ \mathrm{EC}_{3}\\ \mathrm{EC}_{4}\\ \mathrm{EC}_{5} \end{array}$	0.142 0.044 0.463 0.213 0.138	0.08
Education	$\begin{array}{c} \mathrm{ED}_{1}\\ \mathrm{ED}_{2}\\ \mathrm{ED}_{3}\\ \mathrm{ED}_{4}\\ \mathrm{ED}_{5}\\ \mathrm{ED}_{6}\\ \mathrm{ED}_{7}\end{array}$	0.294 0.057 0.106 0.152 0.042 0.229 0.120	0.04	Government Responsibility	$\begin{array}{c} \mathrm{GR_1} \\ \mathrm{GR_2} \\ \mathrm{GR_3} \\ \mathrm{GR_4} \\ \mathrm{GR_5} \\ \mathrm{GR_6} \\ \mathrm{GR_7} \\ \mathrm{GR_8} \end{array}$	0.224 0.052 0.123 0.037 0.052 0.364 0.072 0.076	0.07
Environment	EN1 EN2	0.200 0.800	0.00	Freedom of Expression	FE <sub>1</sub> FE <sub>2</sub>	0.750 0.250	0.00
Human Capital Development	$\begin{array}{c} \mathrm{HC}_{1} \\ \mathrm{HC}_{2} \\ \mathrm{HC}_{3} \\ \mathrm{HC}_{4} \\ \mathrm{HC}_{5} \\ \mathrm{HC}_{6} \end{array}$	0.082 0.276 0.313 0.055 0.229 0.044	0.04	Quality of Life	$\begin{array}{c} QL_1\\ QL_2\\ QL_3\\ QL_4 \end{array}$	0.383 0.210 0.295 0.112	0.08
R&D	RD <sub>1</sub> RD <sub>2</sub> RD <sub>3</sub> RD <sub>4</sub>	0.494 0.082 0.270 0.154	0.09	Social Life	$\begin{array}{c} \mathrm{SL}_1\\ \mathrm{SL}_2\\ \mathrm{SL}_3\\ \mathrm{SL}_4 \end{array}$	0.713 0.059 0.152 0.076	0.09
Technology	$\begin{array}{c} \mathrm{TE_1} \\ \mathrm{TE_2} \\ \mathrm{TE_3} \\ \mathrm{TE_4} \end{array}$	0.405 0.216 0.079 0.300	0.05	Unbiased Practice	$UP_1 UP_2 UP_3 UP_4 UP_4$	0.109 0.177 0.543 0.171	0.13
Unity	UN1 UN2 UN3	0.376 0.474 0.149	0.05				

# TABLE 9 Priorities of the items in each category of the affinity diagram

							1																		T
Ver S	Standard: 9-6-3-1 y Strong ● 9 Strong ● 6 ledium ○ 3 Weak ○ 1	Row Number		Balanced Development	Benchmarking	Communication	Corruption	Economy	Education	Environment	Ethics	Family Institution	Freedom of Expression	Government Responsibility	Human Capital Development	Public Responsibility	Quality of Life	R&D	Social Life	Spiritual Life	Technology	Unbiased Practice	Unity	Importance of the WHATs	Row Number
	Column Number		-	-	5	e	4	5	9	7	~	6	10	Ξ	12	13	14	15	16	17	18	19	20		
C1	Establishing a united Malaysian nation	-			0	•			•			•	0	Ø	•	•			•	•		Ø	Ø	0.178	
C2	C2 Creating a psychologically liberated, secure, and developed Malaysian society							0	•		0		0	•	0		0	0		0	0		0	0.156	2
C3	Developing a mature democratic society	3			0				0				Ø	•		0						•	0	0.133	e
C4	Forming a community that has high morale, ethics, and religious strength			•		0	Ø	•	Ø		Ø	Ø		•	•	•			Ø	Ø		0		0.200	4
C5	Establishing a mature, liberal and tolerant society	5		•		0	0	0	0		0	0		0	0	0	0		0	0		0	•	0.089	5
C6	Establishing a scientific and progressive society	9		0	Ø			0	•	0				Ø			•	Ø			Ø			0.044	9
C7	Establishing a fully caring society	7		0		0			0		0	0	0		0	•			Ø	•		0	0	0.022	7
C8	Ensuring an economically just society	~		0							0			•					0			•	0	0.111	8
С9	Establishing a prosperous society	6		0		0	0	0	0	0	0	0	0	0	0	0	•	•		0	0	0	•	0.067	6
	Weight of HOWs		2.110	1.063		2.068	2.134	2.268	4.823	0.199	2.423	3.268	1.932	6.066	3.136	3.267	1.401	1.266	3.444	3.49	1.065	3.377	3.582		
	Ranking of HOWs	]	13		19	14	12	=	7	20	10	7	15	-	6	~	16	17	5	4	18	9	З		
	Column Number				2	3	4	5	9	7	8	6	10	11	12	13	14	15	16	17	18	19	20		

# FIGURE 4 The QFD Diagram for Malaysian Vision 2020

Further, it is to be noted that the factors related with Economy, R&D, Technology have not received higher priorities. This is because in terms of importance, the nine challenges of V-2020 are skewed towards the moral development of the society rather than its materialistic development.

## 7. DISCUSSION ON SOME SELECTED CATEGORIES OF THE AFFINITY DIAGRAM

The affinity diagram shown in Figure 2 consists of 57 distinct items belonging to 13 categories. Space limitation made it prudent to highlight only selected categories; providing a full-length discussion of all the categories is deemed prohibitive.

**Elimination of Corruption**: Through empirical investigation, Strauss (2001) finds that corruption affects growth and government efficiency in developing countries. Mauro (1995) also found corruption as a robust negative determinant of investment, which in turn has negative implication for the rate of growth in the economy.

Since 1995, Transparency International has been publishing an annual Corruption Perception Index (CPI) that ranks the countries of the world according to the degree to which corruption is perceived to exist among public officials and politicians. The organization defines corruption as 'the abuse of entrusted power for private gain'. However, what is legally defined to be corruption differs between jurisdictions: a political donation legal in some jurisdiction may be illegal in another; a matter viewed as acceptable tipping in one country may be construed as bribery in another. The 2008 Transparency International poll covered over 180 countries. A higher CPI means less (perceived) corruption. According to the CPI, Malaysia's rank in 2008 is 47<sup>th</sup> in the world. This shows Malaysia has ample room for improving public perception about corruption. In fact, people have been highly vocal against corruption of any kind in the government machinery.

**Eradication of Poverty**: Poverty eradication must be the first step in the larger effort to address disparities in the socio-economic achievements of the country. Malaysia's present poverty eradication strategies include, among others, increasing public healthcare to spur productivity and reduce absenteeism, providing housing, cooperation with non-governmental organizations to improve the environment and living conditions. Under the present Ninth Malaysian Plan, the government is enhancing the micro-credit program called the *Amanah Ikhtiar Malaysia* and various capacity building

programs to ensure their effectiveness in lifting households out of poverty. The government also wants to reduce rural-urban income ratio from 1:2.11 in 2004 to 1:2.0 by 2010.

According to Mahathir, no one is against the eradication of absolute poverty regardless of race, and irrespective of geographical location. All Malaysians, whether they live in the rural or the urban areas, must be moved above the line of absolute poverty.

**Developing Human Capital**: It is the human resource that is the most vital for achieving V-2020. A country may be developed materialistically, but if its human resources are kept at bay, then it is unlikely to sustain the economic development. The same concern was communicated by numerous people when we embarked upon the task of data collection. Human capital has bearing on many aspects including public delivery or civil service. In fact, civil servants have emphatic role in achieving V-2020. To bring smoothness in public administration, bureaucracy and bottlenecks must be removed. One respondent maintained: public delivery system needs to be improved in order to realize V-2020. V-2020 requires complete public readiness to embrace the necessary changes and to do so it is imperative for a quantum leap towards human resource development. Citing Japan, Switzerland and South Korea, Abdullah (1993) says these countries do not have minerals and the climate, land structure and soil are not conducive to agriculture. Yet these countries have achieved spectacular economic growth on the strength and ingenuity of their human resources.

**National Unity**: According to the former PM, Tun Dr. Mahathir Mohamad, the most important among all challenges is ensuring a united Malaysian nation (Mohamad, 1991):

"But it would be surprising if the first strategic challenge which I have mentioned the establishment of a united Malaysian nation is not likely to be the most fundamental, the most basic."

The present Malaysian Premier, Dato' Seri Najib Tun Razak, said:

"Racial and religious differences, skin color and cultures should not be obstacles to unity, as, in principle, all races had the same aims and desires in life," (Sennyah and Sharmini, 2005).

For the remaining categories (other than those included in the affinity diagram), though apparently there are many suggestions, but basically they augur the same issue. Therefore, these suggestions are not itemized as the categories

put in the affinity diagram; in other words, we have only one item under this type of category. This item has been expressed by different respondents in different ways. In the following we discuss this type of single item categories.

## 8. SINGLE ITEM CATEGORIES

Normally, a category of an affinity diagram contains more than one item. However, since the categories to be discussed in this section contain only one item, they are not included in the affinity diagram. In addition to the multiple-item categories incorporated into the affinity diagram, these single item categories also reflect the views of the respondents for the realization of the objectives of V-2020.

**Balanced Development**: A country which is developed in only one dimension, e.g., economy, may not be called a developed nation as indicated in the statement of V-2020 (Section 1). The country needs to be developed multilaterally. This was echoed by the following messages from the respondents. As shown, the messages are essentially the same; only the words used are altered for greater sentence cohesiveness.

- In my opinion, development that we, Malaysians should have must be balanced in all aspects of life: morally, intellectually, economically, spiritually, socially and politically.
- A more comprehensive meaning of developed nation rather than focusing on material/physical development but intellectual, moral and spiritual as well.
- The parameter and definition of development need to be ascertained. Development is a holistic concept. Infrastructural development alone at the expense of moral, ethical, and social developments may not be a development in the true sense of the term. As such competing to stay at development stage must not ignore the social engineering of the society on moral and spiritual bases. Otherwise development for the sake of development without adequate moral and spiritual bases to cushion the shocks of physical development may merely lead to devil-upment (and not development)!
- Not focused on one area only must be balanced in all areas.

**Public Responsibility**: The responsibility of realizing V-2020 is not solely assigned to the government or a few individuals, rather every citizen of the nation has a stake towards this achievement. This has been articulated by the respondents in a manifold ways:

- Everybody has to play a role in achieving the developed nation status.
- Malaysians must support all the initiatives taken by the government and new policies promulgated by it.
- Every citizen should change his or her attitude and mentality to achieve V-2020.
- If Malaysia does not achieve the status of developed nation by the year 2020, everybody should triple up efforts to achieve the targets.

**Communication**: As mentioned before, achievement of the national vision cannot be the responsibility of a certain number of individuals; it is the responsibility of all the people. Therefore, a nationwide awareness about V-2020 is a must. This matter has been articulated by the people in the following ways:

- Create awareness in the Malaysian society about how important V-2020 is.
- To educate Malaysians more about the V-2020 nine challenges.
- I think the government should educate the public regarding the status of achievement of V-2020.

**Ethics:** Regarding ethics, overall, the people's voice is that if the citizens do not behave ethically or morally, then mere materialistic development has no meaning. Ethical dimension of the society has been encapsulated by the following suggestions:

- Ethical dimension should be progressively addressed, tackled and solved. Unless this aspect of morality is not solved, achievement in other aspects is virtually not possible.
- We should establish a fully moral and ethical society before we achieve a developed nation.
- First and foremost, Malaysians should be aware that in order to develop a nation, they must develop themselves with strong moral and ethical values.
- Society has to change its way of thinking, be more open minded, work honest and fair.

**Family Institution**: Many people have re-emphasized the proverb 'Charity begins at home'. Children must be guided right from the beginning about the ethics and morality and parents have a great role in this regard. Right attitude and integrity in the early stage pave the way for becoming a good citizen in future. This matter has been expressed by the following suggestions:

- To strengthen the family leadership.
- Honor family institution. Do not put parents in the condition where they have to work until they leave their children at the hand of foreigners (foreign maids). If family intuition is honored, country will also follow suit.
- Try to develop and nurture the children from the beginning with high ethical and moral values.
- Teaching moral values to the kids right from early stage.

**Benchmarking**: Benchmarking is a management practice used for achieving radical change in some particular area. In the business context, organizations benchmark others to improve their business processes. There are numerous examples of successful benchmarking exercises (Andersen, Henriksen and Spjelkavik, 2008; Fawcett et al., 2009). In the national level too, similar exercises can be conducted. For example, Malaysia can learn from Japan regarding how the country maintains its environment and ecosystem while being engaged in developmental activities. What are the strategies of Japan in R&D, transportation, public health, education, etc? Malaysia can learn from all these. A number of respondents have supported this idea:

- To follow in the footsteps of Japan and Korea in becoming developed nations.
- Collaboration with developed countries.

**Spiritual Development**: In general, Malaysians are religious minded and they like to see the spiritual development has taken place in the minds of all Malaysians in tandem with the socio-economic development in the country. A large number of Malaysians' views is that materialistic development has no meaning if there is no mental peace among them! D.M. (full name is not revealed in the newspaper) wrote in the Readers column of the New Straits Times (June 25, 2009, 19)

"... true morality can only be derived from religion, which clearly explains the proper and moral behaviour towards God, oneself, and all other human beings. Leaders should not be afraid to talk about religion and the necessity for people to be well-versed in the tenets of their religion. Academic knowledge and learning from experience are no longer sufficient for individuals to solve the many problems life presents. The only hope is to be found in the realm of religion. Parents, first of all, and then educators, should give religion a role of utmost importance, for certainly no one in the future can be civil, moral and a winner unless he knows his religion'. On the issue of curbing AIDS, Marisa Demori wrote in the Readers column in the New Straits Times (June 26, 2009, 22):

"The government will not be able contain and reduce the incidence of this deadly disease unless it takes steps to create a society that is more religious and God-conscious. ... the government must introduce religious awareness so that youth can find true hope. ... economic objectives have taken priority over religious obligations and the law of God. Unless something is done quickly, we cannot expect things to improve. The leaders of the various communities should remind their followers to learn the tenets of their religion and abide by them. ..The problems society is facing are directly connected to the fact that people have forgotten God and His laws, laws which can only be broken at the expense of great suffering for mankind."

The following suggestions are examples of some of our respondents' aspirations of dealing with a developed religious life:

- No matter how developed our country is, the development of spiritual and mental is very important.
- Strengthen the spiritual side first.
- Material development must be complemented with social and spiritual development. More emphasis should be placed to social development and also to spiritual development.

## 9. CONCLUSION

Achieving the status of a developed country is a common vision to many developing nations. Countries like India and Malaysia have even set up a specific timeline (which is 2020 AD) to reach at the milestone. The present research is carried out to gauge the progress made to achieve Malaysian V-2020. On the basis of people's feedback and the QFD and AHP joint exercise, a number of recommendations are also put forward. In general, people of the nation feel that many more things need to be done before Malaysia can declare herself a developed nation. It is not only in economical aspect, but also the country needs to pay serious attention to human resource development – especially prevention of crime and corruption from all levels of the greater society. In fact, from the ranks of the challenges, the most crucial one is found to be 'Establishing a fully moral and ethical society'. The survey respondents suggested that the government should play a dual role –

in one hand, the government should play its traditional role in strengthening the economy, ensuring quality education to its people and maintain law and order, on the other hand, it should make the people ready to face the challenges ahead and take the necessary steps to address them successfully.

Since Malaysia is a multi-racial country, statistical tests have been performed with respect to the various demographic factors including race. Overall, the respondents on the basis of gender, age, marital status and employment status are consistent in their views. However, a number of differences were found for various races and education levels while ranking the challenges of V-2020. Future research can be conducted on the detailed areas where and why the respondents differ.

#### ACKNOWLEDGEMENT

The authors are thankful to the anonymous referees for their insightful comments that have helped enhance the quality of the paper.

#### ENDNOTES

1. The term 'developed country' is used to categorize countries with developed economies in which the tertiary and quaternary sectors of industry dominate. This level of economic development usually translates into a high per capita income and a high Human Development Index. World Bank defines high income countries as countries with per capita GNP of \$10,000 or more. Traditionally, Canada and the United States in North America, Japan in Asia, Australia and New Zealand in Oceania, and most countries in Northern Europe and Western Europe have been considered as developed countries. Despite their high per capita GNP, the GCC countries in the Middle East are generally not considered developed countries because their economies depend overwhelmingly on oil production and export.

2. Generally speaking, a nation is said to be developed if it has well-developed political, economic, physical, educational and infrastructural institutions in place and every citizen, irrespective of his/her class, gender, or birth enjoys the confidence to live his/her life by choice and not by imposition from any sector, provided such liberty is within the accepted moral norms of the society, without fear or inhibition of any kind or from any quarter. Developed countries have low level of illiteracy, poverty, infrastructural deficiencies, social imbalances, bureaucratic and political bottlenecks, etc and work in

cohesion and unison in one voice and dictum and achieves as a result, the highest in the fields of science, and discoveries, at any given point of time and leads the field with highly developed systems in the area of law, justice and social retribution.

3. Speech delivered by Tun Abdul Ghafar Baba at the opening ceremony of National Seminar Towards a Developed and Industrialized Society: Understanding of the Concepts, Implications and Challenges of Vision 2020, Kuala Lumpur, 5-7 December, 1991.

4. Staff Reporter (2005), 'Selangor developed state: Did you know?', *New Straits Times*, August 27.

5. While articulating the suggestions, all the respondents have not followed the grammatical rules strictly. We have presented the suggestions as articulated by the respondents.

#### REFERENCES

- Abdullah, O.Y. "Human Resource Development: The Key towards a Developed and Industrialized Society." In *Malaysia's Vision 2020:* Understanding the Concept, Implications and Challenge, edited by A.S.A. Sarji, 315-326. Kuala Lumpur: Pelanduk Publications, 1993.
- Akao, Y. Quality Function Deployment: Integrating Customer Requirements into Product Design. New York: Productivity Press, 1990.
- B. Andersen, B., Henriksen and I. Spjelkavik, "Benchmarking Applications in Public Sector Principal-agent Relationships." *Benchmarking: An International Journal* 15, no. 6 (2008): 723-41.
- Bossert, J.L. *Quality Function Deployment: A Practitioner's Approach.* Milwaukee: ASQC Quality Press, 1991.
- Fawcett, S.E., C. Wallin, C. Allred, and G. Magnan, "Supply Chain Information Sharing: Benchmarking a Proven Path." *Benchmarking: An International Journal* 16, no. 2 (2009): 222-46.
- Islam, R. "Prioritization of Ideas in an Affinity Diagram by AHP: An Example of K-economy." *IIUM Journal of Economics and Management* 13, no. 2 (2005): 71-108.
- Kassim, M.S.M. "Vision 2020: Its Linkages with the Sixth Malaysian Plan and the Second Outline Perspective Plan." In *Malaysia's Vision 2020:* Understanding the Concept, Implications and Challenges, edited by A.S.A. Sarji, 67-87. Kuala Lumpur: Pelanduk Publications, 1993.

- Mauro, P. "Corruption and Growth." *Quarterly Journal of Economics*. CX(442) (1995): 681-712.
- Mohamad, M. "The Way Forward: Vision 2020." www.epu.jpm.my, 1991. Accessed on April 28, 2008.
- Rahman, O.A. "Industrial Targets of Vision 2020: The Science and Technology Perspective." In *Malaysia's Vision 2020: Understanding the Concept, Implications and Challenges,* edited by A.S.A. Sarji, 271-299. Kuala Lumpur: Pelanduk Publications, 1993.
- Razak, N.T. "1 Malaysia." www.1malaysia.com.my 2009. Accessed on April 15, 2009.
- Saaty, T.L. Theory and Applications of the Analytic Network Process: Decision Making with Benefits, Opportunities, Costs, and Risk., Pittsburgh: RWS Publications, 2005.
- Sarji, A. Malaysia's Vision 2020: Understanding the Concept, Implications and Challenges. Kuala Lumpur: Pelanduk Publications, Kuala Lumpur, 1993.
   ——. Civil Service Reforms towards Malaysian's Vision 2020. Kuala Lumpur: Pelanduk Publications, 1996.
- Sennyah, P., and P. Sharmini, "Go for Lifelong Education." New Straits Times, May 17, 2005.
- Strauss, T. "Growth and Government: Is There a Difference between Developed and Developing Countries?" *Economics of Governance* 2 (2001): 135-57.
- Yeoh, M. Management Strategies for Vision 2020: Developing Competitive Strategies for the Winning Edge. Kuala Lumpur: Pelanduk Publications, 1993.