

DEGREES OF DISCRIMINATION: RACE AND GRADUATE HIRING IN MALAYSIA

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Abstract

This paper investigates racial discrimination in hiring fresh graduates in Malaysia. We conduct a field experiment by sending fictitious Malay and Chinese résumés of varying quality to job advertisements, then analysing differentials in callback for interview attributable to racial identity. We find that race, much more than résumé quality, affects prospects of getting an interview, with Chinese significantly more likely to be called than Malays, Malaysia's majority group. Within race groups, probability of receiving callback varies based on Chinese language proficiency, Chinese language as a job requirement, and the racial profile of employers. Our findings underscore the complexities of labour market discrimination and policy implications for Malaysia.

JEL classification numbers

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Keywords

Discrimination, Labour Market, Race, Inequality, Malaysia

1. Introduction

Racial discrimination often surfaces in perception and commentary of Malaysia's labour markets. The problem of discrimination in hiring and promotion is highly contentious, fuelled by mutual claims of bias, specifically, against non-Malays in the Malay controlled public sector and against Malays in the Chinese controlled private sector¹. Public universities and the public sector implement forms of positive discrimination, or affirmative action, conferring preference on Bumiputeras in general, and Malays in particular². This majority-favouring affirmative action impacts on the labour market, especially through the supply of tertiary educated Malays, and on discourses surrounding opportunity and preference in both the public and private sectors³. The latter is perceived as favouring non-Malays in recruitment or promotion exercises, particularly Chinese owned businesses in relation to Chinese applicants or staff. Such opinions are often expressed in popular and politicized settings, typically referencing anecdotal accounts, aggregated statistics of racial representation in employment, and generalized assertions⁴. Clearly, the issue bears political weight and socio-economic consequence, far more immense than the miniscule amount of empirical enquiry directed towards it. No systematic study has been

¹ Bumiputera, or "sons of the soil", refers to the Malays and other indigenous groups, which we term non-Malay Bumiputera. The private sector employs about 1.4 million, or 10% of the employed population.

² Affirmative action derives from Constitutional provisions, specifically Article 153 which states that the *Yang Di-Pertuan Agong* (national king) shall safeguard the 'special position' of the Malays and other indigenous people, and protect the legitimate interests of the non-Malay communities. It provides for the *Yang Di-Pertuan Agong* to reserve for the Malays positions in the public service, scholarships or educational or training privileges, and permits or licenses.

³ Shahul Hamid Abdullah, Director-General of the National Civics Bureau, maintained in January 2010 that the civil service is not discriminatory ("Emphasis on raising standards", 30 January 2010, www.thestar.com.my). Lim Teck Ghee and Ramon Navaratnam, in response, wrote of Malay dominance in the Malaysian civil service ("Ethnic dominance in the Malaysian civil service", 8 February 2010 (www.english.cpiasia.net)).

⁴ In May 2006, then Deputy Prime Minister Najib Razak alleged that employers' stipulating Mandarin proficiency as a job requirement constituted discrimination ("Mandarin demand is discriminatory", 31 May 2006, www.thestar.com.my). In May 2010, Pasir Mas MP and Perkasa chief Ibrahim Ali accused the private sector of prejudice against the Malay and Bumiputera workforce ("MPM tidak rasis" [MPM, the Malay Consultative Council, is not racist], 31 May 2010, www.utusan.com.my).

conducted that distinguishes the effect of racial identity on employment prospects from the effects of other observable determinants, particularly academic achievement, personal strengths and language proficiency, as well as employer characteristics such as ownership and control and job specifications.

This study fills this gap by conducting a field experiment to study the relationship between racial identity and labor market outcomes. Specifically, we investigate if race corresponds with the prospects for getting called for interview. We focus on just-graduated Malay and Chinese degree holders, in view of current concerns over graduate unemployment, which unsurprisingly has a racial angle in Malaysia. We locate discrimination where job applicants of different groups but with similar qualifications are treated significantly differently. We formulate fictitious résumés that credibly represent persons of different race with comparable background characteristics and academic qualifications. Malaysia's exceptional education system, in which Malays and Chinese largely follow separate pathways through school and university, required us to randomly assign attributes to résumés of these race groups, instead of the usual practice of randomly assigning names designating race to comparable résumés. Differences in callback rates for interview will be analyzed for the extent to which they derive from differences in qualifications, especially tertiary institution, academic performance, language and technical competency, or from difference in race.

From a substantial literature, we draw mainly on Bertrand and Mullainathan (2004) and Banerjee *et al.* (2009), who incorporate quality differences between résumés as an important element of their studies. Due to the unique structure of the Malaysian education system, and in contrast to common practice in the literature, we do not randomly assign names to résumés, but devise procedures for randomly generating key features, such that we obtain credible Malay and

Chinese résumés differentiated by quality – sorted into Above Average (AA) and Below Average (BA) categories. We find substantial evidence of racial discrimination, with Chinese résumés far more likely to be called for interview compared to Malay résumés, at a considerably higher ratio than that found in previous field experimental studies in other countries. The differential remains after application of this study’s unique controls for applicant, employer and job advertisement characteristics. We also find interesting within-group differentiation, with Chinese language proficiency, Chinese language requirement stipulated in job advertisements, and employer profile – whether the company is Chinese-, foreign-, or Malay-controlled – significantly affecting callback probability. Of note, Chinese language proficiency improves callback prospects for both Chinese and Malay applicants, and for engineering jobs, Malay-controlled companies are less likely than Chinese-controlled companies to call a Malay applicant for interview. Our findings highlight the nuances and complexities of hiring discrimination in Malaysia.

This paper proceeds as follows. Section 2 surveys literature on inequality and discrimination in Malaysia, highlighting the main works as well as the paucity of research on the subject, and presents a brief overview of field experiments of labour market discrimination. Section 3 explains our experimental design – the process of generating fictitious résumés differentiated by quality, while accommodating the peculiar features of Malaysia’s racially demarcated education system. Section 4 describes the statistical summary, Section 5 analyses our findings, and Section 6 concludes.

2. Literature Review

Inequality and discrimination in Malaysia

Inter group inequality remains significant and widespread in Malaysia across various socio-economic spheres, of which some indicators pertaining to the labour market are worth outlining

here. Malaysia's population in 2010 comprised 55.1% Malay, 11.9% non-Malay Bumiputera, 24.3% Chinese, 7.4% Indian, and 1.3% other groups. We focus specifically on differences between Chinese and Malay or Bumiputera (where data do not disaggregate Malays and non-Malay Bumiputeras). In 2010, 29.9% of the Malay labour force had attained tertiary education, more than 25.1% for the Chinese labour force (Department of Statistics, 2010). However, the tertiary educated Malay workforce recorded a higher unemployment of 3.7%, compared to 2.6% for Chinese⁵. Unemployment of Malay graduates is a recurring issue in discussions of education quality, affirmative action, and hiring practices (Lee, 2012). Further up the ladder, Bumiputeras in 2008 constituted 51.0% management and professionals, while Chinese occupied 40.7% of these positions. Bumiputeras make up 19% of chief executive officers, and in membership of professional associations represent around 25% in accounting and 52% in engineering. In terms of income, Chinese households on average earn 1.38 times more than Bumiputera households. As a reflection of ownership, in 2008 Bumiputeras held 21.9% of equity while Chinese held 34.9% (Malaysia, 2010; EPU, 2008).

Little has been researched on discrimination in Malaysia, largely due to restrictions on access to official labour force or income data, as well as the dearth of studies that have directly addressed the question of discrimination and adequately captured quality differences among labour market participants. Besides Fernandez (2009), who examines gender wage differentials through decomposition of earnings regressions using data extracted from the Malaysian household income surveys, no other work has been conducted specifically on labour market discrimination. There are, however, studies that imply the existence of labour market discrimination in Malaysia, notably Snodgrass (1980), CMI (2005) and Faaland et al. (2003). Snodgrass (1980) argued that companies headed by Chinese were disinclined to employ Malays,

⁵ Authors' calculations from Department of Statistics (2010).

and ownership and management structures of Chinese firms impeded Malay entry. CMI (2005) and Faaland, et al. (2003), in analyzing employment and earnings, found that income for Bumiputera are 32% lower than for Chinese, after controlling for differences in education, experience, industry, and occupation. They deduced that there is some form of discrimination against the Bumiputera in the private sector. CMI (2005) also found that when the non-Bumiputera owners have the majority of shares, almost 80% of the managers and 90% of CEOs are Chinese. Both CMI (2005) and Faaland et al. (2003) further argued that non-Chinese not only faced obstacles in entering the private labour market, but also encountered discrimination after entry, mainly in the form of denied advancement and lower earnings.

Research on earnings and wealth determinants broadly concur. Milanovic's (2006) study of earnings inequality in Malaysia using household income survey data obtained a pro-Chinese premium of 31%, after controlling for other determinants. Muhammed (2011), analysing of the determinants of wealth, found similar results, with an estimated pro-Chinese bias of 45% at the median quantile, and 112% at the first (lowest) quantile. However, these studies, being derived from non-experimental national-level household income survey data, omit various individual qualifications, achievements and positively regarded attributes. Most saliently, academic qualifications are identified in a highly aggregated form, with degree qualification recorded as a binary homogeneous variable. In terms of labour market interactions, it is important to test for disparities between highly qualified Malays and highly qualified Chinese. However, differentiation in academic achievement (e.g. grades), and other personal characteristics favoured in labour market interactions (e.g. language or technical skills), substantially impact on labour market outcomes. Field experiments provide a mechanism to account for such variables.

Field experimental studies

Researching discrimination is fraught with various complications, stemming from its subjective and complex manifestation, as well as the correspondence of racial identity with other characteristics and qualifications that impact on employment prospects (Darity and Mason 1998, Heckman 1998, Arrow 1998). Field experiments have emerged as a set of methods that go some distance in gathering data specifically to inform the question of discrimination. Research employing these techniques originated from studies by British sociologists in the early 1970s and has become applied in the social sciences in recent years, across numerous countries (Riach and Rich 2002, Pager 2007). This approach has been widely used in analyzing discrimination in the labour market, with the focus mainly on ethnicity, race, nationality, gender, physical appearance, and sexual orientation. The audit studies generally follow one of two modes: in-person studies, where research agents attend interviews and record whether they are offered a job, and correspondence studies, where applications are mailed in and callback for interview is the measured outcome.

This study adopts the correspondence mode. Most criticism of field experiments, notably by Heckman (1998), are directed at audit studies, where the interactive and responsive act of attending interviews amplifies subjectivity, arising from the inability of research assistants posing as job applicants to completely detach their motivations and the lesser control over employer perceptions due to personal appearance and conduct. The correspondence method obviates main problems of the in-person approach to a meaningful extent, by confining interaction between applicant and employer and more closely managing the content of applications, which are limited to résumés. Other criticisms arise, centred on the fact that correspondence studies stop at the call for interview stage (Darity and Mason, 1998, p. 81). It is

plausible that discrimination at this early stage will carry over to the subsequent stages of hiring, remuneration and promotion, although the magnitude will most probably differ. There are reasons to expect that discrimination at the interview screening stage to be higher than at the actual interview, owing to the greater difficulty of showing prejudice after face-to-face encounters. At the stage of employment, employees are able to obtain information about differentials in reward or treatment, providing further check against discrimination (Pager, 2007). We take cognizance of these limitations as we proceed.

The literature of field experiments on hiring discrimination based on race, ethnicity or nationality, the categories germane to this study, is extensive in geographic scope (Bertrand and Mullainathan, 2004; Banerjee et al., 2008; Siddique, 2011; Carlsson and Rooth, 2007; Booth et al., 2011; Bursell, 2007; Fryer, 2010, Kabir and Evans, 2002; Bovenkerk et al., 1995; Goldberg et al., 1996; Mahuteau and Junankar, 2008; Oreopoulos, 2009; Silberman et al., 2007; Riach and Rich, 1991). Each study is necessarily contextualized to country-specific conditions and labour market norms, finding evidence of discrimination, primarily against minority groups or migrants. Our study likewise fits the Malaysian situation, including its outstanding feature that the majority Malays are expected to be the group discriminated against in private sector labour markets.

3. Experimental Design

Compared to much of the literature, this study enjoyed one distinct advantage and encountered one distinct challenge. The demographic and socio-political situation of Malaysia ensures no ambiguity in racial identity based on names. Malay and Chinese naming clearly denotes race; we do not need to conceive “Malay-sounding” or “Chinese-sounding” names. For instance, names such as Abdul or Muhammad belong exclusively to the Malays while names

such as Lim or Tan belong exclusively to the Chinese. Hence, the process of attaching names to résumés is plain and simple (see Appendix 1 for a sample of racially distinctive names).

However, the fact that most Malays and Chinese pass through vastly different, in many cases racially exclusive education systems⁶, poses challenges to the established practice in correspondence studies of randomly assigning names to résumés of comparable quality. In the Malaysian context, assigning a Chinese name to a résumé that is evidently of Malay background, and vice versa, will introduce highly implausible applicant profiles and potentially generate an applicant pool that is overly unrepresentative of a cohort of university graduates. For example, places in the University Teknologi MARA (UiTM), which in 2009 enrolled 140,000 out of a total 590,000 in the public university system, are reserved exclusively for Malay and Bumiputera students, while Universiti Tunku Abdul Rahman (UTAR) has maintained overwhelmingly Chinese and virtually zero Malay enrolment.

We draw primarily on Bertrand and Mullainathan (2004) and Banerjee *et al* (2009), due to the salience of controlling for quality of applicants in their studies. However, we are unable to pick from pools of high quality and low quality résumés, then randomly assign names particularly associated with certain groups. Instead, we select from pools of Malay and Chinese résumés and randomly generate quality-linked attributes.

We began in July 2011 by compiling résumés from an online employment portal, selecting those with minimum qualification of a university degree. We limited the search to résumés with engineering and accounting or finance degrees, having elected to apply to these job categories and to match academic qualifications with job specifications. We then removed the

⁶ In 2010-2011, the student body of Malay-medium national primary schools comprised 94% Bumiputeras, 1% Chinese, 3% Indians, and 2% others, while Chinese-medium national-type schools comprised 88% Chinese, 9% Bumiputeras, 2% Indians and 1% others. Tamil-medium schools had a 100% Indian population (Malaysia, 2012, p. 3-23).

actual name and contact details and analyzed this pool to find ways and cut-off points for stratifying résumés into upper and lower groups. Upon inspection, and in the interest of simplicity, we determined that the cumulative grade point average (CGPA) serves as a reasonable proxy for quality of applicant. Higher CGPA was found to correspond with more active extra-curricular involvements and leadership roles, and generally more impressive résumés⁷. Based on a median of about 3.1, we placed résumés with CGPAs in the range 2.2-3.0 in a Below Average (BA) category, and those with CGPAs in the range 3.1-3.9 we took to represent Above Average (AA) applicants. We generated one reservoir each for engineering and accounting/finance, and pooled résumés fourfold: AA Malay, BA Malay, AA Chinese, BA Chinese.

For each job advertisement, we created four fictitious résumés of male applicants (See Appendix 2 for samples). We randomly drew one résumé from each of the four pools. For jobs that stipulated academic specialization, particularly in the branches of engineering such as chemical or mechanical, we further confined the pool to graduates of these specific fields. For all drawn résumés, we also randomly generated a CGPA for each résumé within the corresponding range, since we would reuse the same pool. For example, a résumé from the AA Malay pool would be randomly selected and re-assigned a CGPA between 3.1 and 3.9. We then inserted a pseudonym of the corresponding race and altered the mailing address. All résumés were male and fresh graduates with no previous full-time work experience. We also attempted to represent command of English – a frequently cited cause of graduate unemployment – by attaching a cover letter to each application corresponding with low and high levels of proficiency. Letters representing high English proficiency were written with reasonably polished and grammatically

⁷ Among résumés with CGPA of 3.1 or above, 53.3% had held at least one leadership position while at school and 4.5% indicated no involvement in extra-curricular activities. For those with CGPA at or below 3.0, 41.3% held some leadership position, while 13.4% did not indicate any activities.

correct prose, while those representing low English proficiency were riddled with errors. We randomly distributed these letters across both Above Average and Below Average résumés.

To facilitate recording callbacks, all résumés within each of the four groups stated a common email and phone number, through which we received and recorded callbacks. The vast majority of communication used the mobile phone channel. We followed Banerjee *et al*'s (2008) method of not answering the call, then return the call based on caller ID to obtain the company name, since Malaysians do not practice leaving voice mail messages. This method proved simple and effective.

From August until December 2011, we sent 3012 résumés to 753 engineering and accounting/finance jobs posted online. These jobs vacancies were concentrated in urban areas adjacent to industrial zones of Peninsular Malaysia, with a majority located in greater Kuala Lumpur. We elected to apply to engineering and accounting/finance jobs, in view of their high rate of new vacancies and relative simplicity of applications (generally not requiring portfolios or project documents). For brevity, we refer to the latter group as accounting jobs, which constitutes a larger share than finance jobs. We should also note that this classification refers to job type, not economic sector, and that engineering positions were primarily posted by engineering companies, whereas accounting openings were offered by companies across all sectors. We applied to vacancies in two employment portals – www.jobstreet.com.my and www.jobsdb.com/my - because of their extensive listings and popularity among job seekers, as well as their facility allowing applications by email, without the need to open online accounts. Thus, the procedure was much simpler, and we could ensure that every advertised job we applied to received four résumés as required by experimental design. We were unable to conduct this field experiment on public sector jobs, which constitute about 10% of the employed population,

because these are only accessible through a centralized portal in which applicants open an account, deposit résumés and state job preferences, leaving it to the system to match résumés with job openings. The public sector was, unfortunately, precluded from our study in spite of its importance to Malaysia's labour market dynamics, since the portal does not permit direct applications to job advertisements and thus we could not ensure that each job opening would receive four résumés according to our specifications. We restricted applications to jobs classified as "entry level" and requiring at least a diploma. We also recorded job advertisement data, particularly specification of language and skill requirements.

After completing the job application stage and allowing two months to record callbacks for the last posted jobs, we compiled company profile data. We ventured to obtain information on the 753 companies in our sample from the Companies Commission of Malaysia, which maintains a database of company directors, shareholders and revenue. Upon receiving the data, based on the majority of directors and shareholders (not shareholdings), we classified companies according to the group most likely to exercise control and decision-making power. In most companies, a clear majority of shareholders and directors belong to one category, most saliently, Chinese, foreign, or Malay. The categories that emerged from this process were Chinese control, foreign control, Malay control, as well as a small number under Indian control. We also classified some as foreign-local joint ventures (equal number of foreign and Malaysian, usually Chinese, interests), companies under mixed control (similar numbers of Chinese, Malay or Indian shareholders and directors) or under government-linked company (GLC) control. To organize these groups into consistently defined and adequately sized samples, we combined majority foreign-controlled and foreign-local joint ventures into one category, foreign-controlled. The samples of Indian-, mixed- and GLC-controlled companies were negligibly few. We

obtained company profile data for 689 companies, or 91.5% of the companies to which we sent job applications.

4. Descriptive Statistics

Some descriptive statistics and analyses of applicant characteristics and callback rates are worth highlighting. Table 1 summarizes the characteristics of our fictitious résumés, particularly their academic achievement (CGPA), universities (public and private), language ability (English, Malay, Chinese), and other qualifications and skills (e.g. technical, leadership roles). The résumés created for this study differentiate quality of job applicants in notable respects. As determined by experimental design, CGPAs randomly generated above and below the 3.1 cut-off point substantially differ, with a mean of 3.51 for above average and 2.61 for below average résumés. Other characteristics derive from the content of résumés randomly selected from our reservoir. We observe slight differences in language proficiency. Among above average résumés, 95% declare ability to read and write in English and 56% do the same for Chinese, whereas the figures for below average résumés are, respectively, 88% and 45%.

The Malay and Chinese résumé pools are distinguishable along the expected lines, broadly corresponding with segmentation in Malaysia's education system. A higher proportion of Malay candidates graduate from public universities (66%), while a majority of the Chinese candidates (62%) have private universities qualifications. 22% of Malay résumés are graduates of UiTM (exclusively Bumiputera, public institution). Similarly, 18% of Chinese résumés hold a degree from UTAR, a predominantly Chinese private institution. The stated ability to read and write English and Malay are high all around, although slightly higher in above average résumés. Fluency in Chinese language obviously varies, with 77% of Chinese résumés and 25% of Malay résumés declaring ability to read and speak Chinese.

Table 1: Mean and standard deviation of résumés sent

	Overall		Above Average		Below Average		Malay		Chinese	
	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.
CGPA	3.06	0.51	3.51	0.24	2.61	0.23	3.06	0.51	3.06	0.51
Public university	0.52	0.50	0.59	0.49	0.45	0.50	0.66	0.47	0.38	0.48
Major public university	0.18	0.39	0.24	0.42	0.13	0.34	0.17	0.38	0.20	0.40
UiTM	0.11	0.31	0.10	0.31	0.11	0.32	0.22	0.41	0.00	0.00
Other public Universities	0.33	0.47	0.35	0.48	0.32	0.47	0.49	0.50	0.18	0.38
Private university	0.48	0.50	0.41	0.49	0.55	0.50	0.34	0.47	0.62	0.48
UTAR	0.11	0.32	0.07	0.25	0.16	0.37	0.05	0.21	0.18	0.39
Other private Universities	0.37	0.48	0.34	0.48	0.39	0.49	0.29	0.46	0.44	0.50
Can read and write:										
English	0.92	0.28	0.95	0.22	0.88	0.32	0.92	0.28	0.92	0.27
Malay	0.91	0.28	0.94	0.23	0.88	0.32	0.91	0.29	0.92	0.27
Chinese	0.51	0.50	0.56	0.50	0.45	0.50	0.25	0.43	0.77	0.42
Internship	0.39	0.49	0.41	0.49	0.38	0.48	0.44	0.50	0.34	0.47
Specific/technical skill	0.82	0.38	0.85	0.36	0.79	0.41	0.88	0.32	0.76	0.43
Leadership role in school	0.47	0.50	0.53	0.50	0.41	0.49	0.47	0.50	0.47	0.50
Number of résumés	3012		1506		1506		1506		1506	

Notes:

¹Major public university refers to University Malaya (UM), National University (UKM), Science University (USM) and Putra University (UPM), which are the older and more established institutions.

²MARA University of Technology (UiTM): public institution with exclusively Malay/Bumiputera enrolment.

³Tunku Abdul Rahman University (UTAR): private institution with predominantly Chinese enrolment. Indeed, our reservoir of résumés did not contain any Malay graduates of UTAR. We randomly assigned UTAR to 5% of Malay résumés.

Our sample of employers, according to the group holding control, consists of 63.7% Chinese controlled companies, 10.6% Malay controlled, 19.0% foreign controlled (which, as explained above, refers to both fully foreign controlled and local-foreign partnerships), and 6.7% subsumed as others (including Indian-controlled, shared Malaysian controlled and government-linked company controlled). Government-linked companies and companies jointly controlled by Malaysians (Malay-Chinese, Indian-Malay or Chinese-Indian) were of interest to this study, but

the samples were too small for analysis. Company control corresponds to some extent with language requirements, with 34.8% of Chinese-controlled companies specifying Chinese language as required or preferred, compared to 22.1% for foreign-controlled companies and, interestingly, 9.6% for Malay-controlled companies.

5. Statistical Analysis

Analysis of Résumés and Callback for Interview

Differentials in callback rates

Our first stage of analysis involves computing callback rates – the proportion of job applications that get called for interview (Table 2). Overall, 13.1% of résumés registered callbacks. Our differentiation of quality broadly holds, with 14.3% of above average résumés called for interview, higher than the 12.0% for below average résumés. These results provide some validation for our method of demarcating résumé quality.

Table 2: Callback numbers and rates, by race and sector.

	Number of callbacks	Number of résumés sent	Callback rate (%)
All résumés			
Overall	396	3012	13.1
Above average	216	1506	14.3
Below average	180	1506	12.0
Malay résumés			
Overall	63	1506	4.2
Above average	39	753	5.2
Below average	24	753	3.2
Chinese résumés			
Overall	333	1506	22.1
Above average	177	753	23.5
Below average	156	753	20.7
Engineering jobs			
Overall	221	1600	13.8
Malay résumés	23	800	2.9
Chinese résumés	198	800	24.8
Accounting jobs			
Overall	175	1412	12.4
Malay résumés	40	706	5.7
Chinese résumés	135	706	19.1

We observe stark racial disparity: Chinese résumés register a mean callback rate of 22.1%, steeply above the 4.2% for Malay résumés. This equates with a differential of 17.9 percentage points and an inter-group callback ratio of 5.3. In other words, for every Malay applicant that gets called, on average, 5.3 Chinese get called. We also note variations across job type. Interacting race and job type, we note that Chinese applicants to engineering jobs are more likely to be called, followed by Chinese applicants to accounting jobs, Malay applicants to accounting jobs, then Malay applicants to engineering jobs, who register an exceptionally low 2.9% callback rate. These differentials demonstrate that the dynamics of selection for interview significantly vary between engineering and accounting/finance jobs, warranting separate analyses according to job type.

Characteristics of our résumés, job advertisements and employers potentially impact on the prospects for getting called for interview. Table 3 displays callback rates derived from the variables pertinent to recruitment prospects, for all résumés and for Malay and Chinese separately. We show the ratio of callback rates relative to the overall mean of each group. These figures offer a more detailed description of the disadvantage among Malay candidates holding particular characteristics or applying to particular jobs and companies, relative to the average Malay callback rate of 4.2%. Correspondingly, we present the relative advantage of Chinese with specific personal or application characteristics, based on the mean of 22.1%. The rightmost column shows inter-group callback differentials, with the overall ratio of 5.3 serving as a baseline. Our findings underscore the importance of treating race as heterogeneous groups and of accounting for the multiplicity of interactions between qualitatively varied job-seekers and employers.

Reputation, track record, and perception of universities impact on prospects for labour market entrants. Malay and Chinese graduates of the four major public universities register relatively higher callback rates, and a considerably lower Chinese-Malay callback ratio of 4.0. Holders of UiTM degrees, an exclusively Malay university, record a callback rate of 4.3%, virtually the same as the overall average of 4.2% for Malay résumés, suggesting there is no penalty for holding a UiTM degree. Chinese UTAR graduates record the highest callback rates among these categories of institutions, while Malay UTAR graduates, albeit a very small sample, also experience higher callback rates.

In terms of callback rates corresponding with other résumé characteristics, Malay applicants are generally more differentiated while variation among Chinese applicants is minor, or almost negligible. Malay résumés stating proficiency in Chinese or holding a leadership position in school record callback rates above the overall Malay mean. In contrast, callback rates of Chinese résumés stating language abilities and other positively regarded attributes are basically equivalent to the overall Chinese mean. Job requirements and employer profiles reveal other notable associations with callback rates. Advertisements that note proficiency in Chinese language as a requirement or advantage call Chinese résumés at a markedly higher rate (29.1%) and Malay résumés at a relatively lower rate (3.5%). English and Malay proficiency stated in the résumé, and good English in the cover letter, exert almost negligible impact on callback rates, particularly for Chinese applicants. The negligible effect of command of these languages is expected, given the near unanimity of applicants self-claiming these abilities. However, it is somewhat surprising that quality of English as presented in the cover letter does not matter, given the importance attached to this skill, although it is possible that employers place priority on assessing English proficiency at the interview, or simply do not read cover letters.

Table 3: Callback rates, by résumé characteristics, job requirements and company profile

	Malay résumés		Chinese résumés		Chinese per Malay callback ratio
	Callback rate (%)	Ratio to mean	Callback rate (%)	Ratio to mean	
Overall mean	4.2	1.00	22.1	1.00	5.3
<u>Résumé characteristics</u>					
Graduate of:					
Public university (overall)	4.7	1.12	22.8	1.03	4.9
Major public university	6.2	1.48	25.0	1.13	4.0
UiTM	4.3	1.02			
Private university (overall)	3.1	0.74	21.7	0.98	7.0
UTAR	5.8	1.38	25.4	1.15	4.4
Non-UTAR private university	2.7	0.64	20.4	0.92	7.6
Technical/specific skills	3.9	0.93	22.3	1.01	5.7
Leadership role in school	5.2	1.24	22.0	1.00	4.2
Proficient in language					
English	4.4	1.05	22.0	1.00	5.0
Chinese	5.4	1.29	23.0	1.04	4.3
Malay	4.4	1.05	22.0	1.00	5.0
Quality of English in cover letter					
High	4.6	1.10	22.6	1.02	4.9
Low	3.8	0.90	21.6	0.98	5.7
<u>Job requirements</u>					
Chinese language	3.5	0.83	29.1	1.32	8.3
English language	4.5	1.07	22.2	1.00	4.9
Malay language	4.5	1.07	21.2	0.96	4.7
Work experience	4.6	1.10	23.1	1.05	5.0
Technical skill	2.3	0.55	22.0	1.00	9.6
<u>Company profile</u>					
Chinese-controlled	3.8	0.90	23.9	1.08	6.3
Foreign-controlled/foreign-local JV	1.9	0.45	20.2	0.91	10.6
Malay-controlled	3.4	0.81	5.5	0.25	1.6

With regard to callback rates with reference to employer profile, we observe that Chinese-controlled companies are more likely to call Chinese applicants (1.08 per Chinese mean), and less likely to call Malay applicants (0.90 per Malay mean). Foreign-controlled companies are substantially less likely to respond favourably to Malay résumés (0.45 per Malay mean). The responses of Malay-controlled companies to our job applicants shed interesting and somewhat surprising light. Malay-controlled companies call 5.5% of Chinese résumés, considerably below

the mean of 22.1%. However, while we might expect Malay-controlled companies to favour Malay applicants, we actually find them less inclined than the average company – as well as Chinese-controlled companies – to call Malay applicants. Malay-controlled companies call Chinese applicants 1.6 times more than Malay applicants.

Probit regression estimations

To what extent does race affect the chances for getting called for interview after controlling for applicant quality? How do features of job advertisements and employers impact on interview prospects? We run probit regressions to estimate the independent effects of the range of résumé, job advertisement and firm characteristics on the probability of getting called for interview. The results are presented in Table 4. Equation 1 reports results from a probit regression with two independent binary variables for race and résumé quality. It shows that the probability of getting a callback is much lesser for Malays relative to Chinese; being Malay reduces the callback probability by 0.186. Being Above Average slightly increases the probability of callback – by 0.025 relative to Below Average. Equations 1a and 1b demonstrate difference in magnitude of discrimination between engineering and accounting jobs.

We then disaggregate quality into the various applicant achievements and characteristics contained in our résumés, and incorporate job requirements and firm profile variables into the equation. As shown in equations 2, 2a and 2b, race remains the predominant predictor of callback, even after controlling for the range of plausible determinants. CGPA enters as a continuous variable; higher CGPA slightly augments callback prospects. A one point increase in the CGPA raises the probability of being called for interview by 0.025 in all jobs. However, we do not obtain significant results for most other variables, with the exception of Chinese language fluency (equation 2) and Chinese control of companies (equation 2a).

Table 4: Probit regression: determinants of interview callback (marginal effects)

Equation number	Outcome: Called for interview=1					
	All jobs (1)	Engineering jobs (1a)	Accounting jobs (1b)	All jobs (2)	Engineering jobs (2a)	Accounting jobs (2b)
<u>Résumé characteristics</u>						
Malay	-0.186***	-0.232***	-0.137***	-0.167***	-0.215***	-0.110***
Above Average	0.025***	0.025**	0.025***			
CGPA				0.020**	0.028***	0.023**
Major public university				0.029	0.023	0.021
UiTM				0.026	0.057	-0.019
Private university				-0.003	0.004	0.004
Fluent in Chinese				0.037**	0.034	-0.003
Fluent in English				-0.015	-0.016	0.037
<u>Job requirements</u>						
Chinese required				0.025	0.038	0.018
English required				0.003	-0.005	0.014
<u>Company profile</u>						
Chinese controlled				0.042	0.109***	-0.018
Foreign controlled				0.014	0.037	0.028
Chi-squared	195.1	142.4	61.3	236.5	204.4	81.6
Number of obs.	3012	1600	1412	2756	1544	1212

Significance levels: ***0.01; **0.05; *0.10. Standard errors are corrected for clustering at firm level. Chi-square test is for all determinants jointly zero.

Notes:

¹ Equations 4-6 control for personal characteristics: internship, personal strengths, general skills, specific/technical skills, leadership role in school

² Equations 4-6 control for job requirements: Malay language required, experience required

Our findings again indicate different dynamics in engineering and accounting job markets, with higher discrimination against Malays in the former, while variables associated with Chinese language impact on callback prospects. However, treating the race variable homogeneously may omit important differentiation within the group. As demonstrated in Table 3, the interaction of race with other individual, job or employer characteristics yields important variation that warrant further exploration through multiple regression.

Tables 5 and 6 present estimations from probit regressions that heterogenize Malay and Chinese résumés, respectively, into constituents of a particular characteristic. We also evaluate Malay-disfavouring and Chinese-favouring discrimination separately. Each numbered equation reports the coefficients on a dummy variable representing the race group disaggregated by a set

of categories. The differential between AA and BA remains larger among Malays than Chinese, after controlling for other applicant qualities and for job requirements and company profile (equation 3a and 3b compared to 9a and 9b). Malays with Chinese proficiency are more likely to be called for interview than Malays without, across both job types (equations 4a and 4b), while the same factor exerts opposing effects for Chinese – positive in engineering, negative in accounting (10a and 10b). Malay graduates of all fields from major public universities are relatively less discriminated against, while Malay private university graduates face the lowest probability of callback among the categories in equations 5a and 5b. UiTM degree holders, on the other hand, on average fare well in engineering jobs but are less preferred for accounting positions. For Chinese applicants, UTAR graduates enjoy a callback premium over other graduates, and there is less of a gap between private and public institutions.

Turning to job advertisement contents germane to this study, we find that Chinese language considerably differentiates both Malay and Chinese applicants, reducing the probability of callback for Malays relative to jobs that do not stipulate this requirement, while raising the probability for Chinese, especially in engineering jobs (equations 6a and 12a). Notably, English language requirement is associated with a reduction in discrimination against Malays, especially in accounting jobs (equations 7a and 7b), but has little effect on Chinese callbacks (equations 13a and 13b).

As expected, job applicants face different callback prospects depending on employer profile. For engineering jobs, Malays applying to foreign-controlled companies are least likely to receive callback. The greater degree of discrimination against Malay graduates by Malay-controlled companies relative to Chinese-controlled companies, noted in Table 3, remains significant after controlling for other determinants, although only in engineering jobs (equation 8a). In accounting jobs, Chinese control corresponds with a lower probability of a Malay getting callback than Malay control or foreign control (equation 8b). Chinese company control augments Chinese-favouring discrimination in engineering, while being under foreign control raises the probability of Chinese callback in accounting jobs (equations 14a and 14b).

Table 5. Probability of callback for Malay applicant, disaggregated by résumé characteristics, job requirements and company characteristics (marginal effects).

	Engineering	Accounting
<u>Résumé characteristics – overall</u>	(3a)	(3b)
Malay résumé*Above average	-0.212***	-0.101***
Malay résumé*Below average	-0.252***	-0.156***
<u>Résumé characteristics – language proficiency:</u>	(4a)	(4b)
Malay résumé*Proficient in Chinese	-0.215***	-0.098***
Malay résumé*Not proficient in Chinese	-0.241***	-0.123***
<u>Résumé characteristics – university type:</u>	(5a)	(5b)
Malay résumé*Major public university	-0.171***	-0.080***
Malay résumé*UiTM	-0.165***	-0.133***
Malay résumé*Other public university	-0.227***	-0.076**
Malay résumé*Private university	-0.227***	-0.171***
<u>Job requirements – language:</u>	(6a)	(6b)
Malay résumé*Chinese language required	-0.264***	-0.123***
Malay résumé*Chinese language not required	-0.204***	-0.108***
	(7a)	(7b)
Malay résumé*English language required	-0.207***	-0.087***
Malay résumé*English language not required	-0.230***	-0.143***
<u>Employer profile – control:</u>	(8a)	(8b)
Malay résumé*Chinese-controlled company	-0.186***	-0.141***
Malay résumé*Malay-controlled company	-0.246***	-0.095*
Malay résumé*Foreign-controlled company	-0.335***	-0.098**
Malay résumé*Other-controlled company		-0.028

Significance levels: ***0.01; **0.05; *0.10

Reference group for the above coefficients: Chinese résumé.

Controls: résumé characteristics, job requirements and company profile.

Table 6. Probability of callback for Chinese applicant, disaggregated by résumé characteristics, job requirements and company characteristics (marginal effects).

	Engineering	Accounting
<u>Résumé characteristics – overall</u>	(9a)	(9b)
Chinese résumé*Above average	0.241***	0.129***
Chinese résumé*Below average	0.217***	0.122***
<u>Résumé characteristics – language proficiency:</u>	(10a)	(10b)
Chinese résumé*Proficient in Chinese	0.228***	0.110***
Chinese résumé*Not proficient in Chinese	0.203***	0.133***
<u>Résumé characteristics – university type:</u>	(11a)	(11b)
Chinese résumé*major public university	0.218***	0.110***
Chinese résumé*other public university	0.200***	0.081**
Chinese résumé*UTAR	0.234***	0.154***
Chinese résumé*other private university	0.192***	0.115***
<u>Job requirements – language:</u>	(12a)	(12b)
Chinese résumé*Chinese language required	0.242***	0.141***
Chinese résumé*Chinese language not required	0.183***	0.100***
	(13a)	(13b)
Chinese résumé*English language required	0.210***	0.119***
Chinese résumé*English language not required	0.198***	0.112***
<u>Company profile – control:</u>	(14a)	(14b)
Chinese résumé*Chinese-controlled company	0.223***	0.113***
Chinese résumé*Malay-controlled company	0.082	-0.011
Chinese résumé*foreign-controlled company	0.162***	0.157***
Chinese résumé*other-controlled company	0.155**	0.162***

Significance levels: ***0.01; **0.05; *0.10

Reference group for the above coefficients: Malay résumé.

Controls: personal characteristics, job requirements and company profile.

Analysis of Job Advertisements and Employers

Our data further afford us the scope to investigate discriminatory behaviour at the job advertisement level, with employers' pattern of callbacks as the outcome. To proceed, we tabulate job ads by the callbacks received, from zero to four and all combinations in between (Table 7). This alternate angle on the same dataset reinforces our findings of the breadth of racial discrimination, as well as validates our demarcation of résumé quality. Among the job ads that received at least one callback, the most prevalent category by far is the one that called both Chinese applicants but no Malay applicants (105 job ads, or 13.9% of the total). This is followed

by job ads that called only AA Chinese, then only BA Chinese, all four résumés, and only AA Malay. Although both AA and BA Chinese are called in many instances, AA applicants fare considerably better than BA applicants.

Following Banerjee *et al.* (2009) and Bertrand and Mullainathan (2004), we regard firms that call back more of one group than another are regarded as favouring that group, while firms that call back equal numbers are considered as treating the groups equally. Departing from their framework, however, we regard firms that call none of the résumés as insufficiently signalling a decision, and hence cannot be considered as equally treating applicants. Thus, we create four categories, as shown in Table 7: No callbacks (top left cell), Chinese favouring (figures marked **), Malay favouring (figures marked *) and equal treatment (remaining figures). Summing up the percentages of these four categories, in the full sample we classify 72.4% as recording no callbacks, 4.0% as showing equal treatment, 22.7% as Chinese-favouring and 0.9% as Malay-favouring. We also compute the distribution of job ads according these categories, within company profile and job requirement sub-samples (Table 8). The figures suggest that Chinese control and foreign control, as well as Chinese language requirements, correspond with a Chinese-favouring disposition. Among Malay controlled companies, a relatively larger share of employers is Malay-favouring (4.1%), but still less than the share that is Chinese-favouring (6.8%).

Table 7: Number of job advertisements, by combination of callbacks (percentage of total job advertisements in parentheses)

	No Malay callbacks	AA Malay only	BA Malay only	AA Malay & BA Malay
No Chinese callbacks	545 (72.4)	3 * (0.4)	1 * (0.1)	1 * (0.1)
AA Chinese only	34 ** (4.5)	12 (1.6)	0	1 * (0.1)
BA Chinese only	21 ** (2.8)	1 (0.1)	0	1 * (0.1)
AA Chinese & BA Chinese	105 ** (13.9)	7 ** (0.9)	4 ** (0.5)	17 (2.3)

Note: ** Chinese-favouring; * Malay-favouring.

Table 8: Proportion of equal treatment, Chinese favouring and Malay favouring employers, by company profile and job requirement

	Company profile			Job requirement		
	Overall	Chinese-controlled	Malay-controlled	Foreign-controlled	Chinese language required	English language required
No callbacks	72.4	71.1	89.0	74.8	64.7	71.8
Equal treatment	4.0	4.1	0.0	2.3	3.7	4.4
Chinese favouring	22.7	24.4	6.8	22.9	30.7	22.5
Malay favouring	0.9	0.5	4.1	0.0	0.9	1.3
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Number of job advertisements	753	439	73	131	215	387

Following this classification of firms by treatment of Chinese and Malay applicants, we investigate the determinants of such outcomes. Due to sample size constraints, we are able to run probit regressions only with Chinese-favouring as the dependent variable. This round of estimations yields the results in Table 9. Being Chinese-controlled or foreign-controlled each raise the probability of favouring Chinese, with larger coefficient attached to the former (equation 15). However, these effects of company control diminish after we control for job type; companies offering engineering jobs are more likely to favour Chinese (equation 16). The coefficients on Chinese-control and foreign-control diminish further, and to nearly identical magnitude, with the inclusion of job requirement variables, with Chinese language requirement exerting the largest effect (equation 17). English language requirement is associated with a lesser probability of being Chinese-favouring.

Table 9. Probit regression: Determinants of companies favouring Chinese (marginal effects)

Equation number	Outcome: Chinese-favouring=1		
	(15)	(16)	(17)
<u>Company profile:</u>			
Chinese-controlled	0.144***	0.130***	0.099**
Foreign-controlled	0.130**	0.107*	0.095*
<u>Job type:</u>			
Engineering		0.081**	0.086**
<u>Job requirements:</u>			
Chinese language			0.127***
English language			-0.071*
Technical skills			0.003
Chi-squared	9.8	16.2	26.6
Number of observations	689	689	689

Significance levels: ***0.01; **0.05; *0.10

Explaining Discrimination

This study finds substantial evidence of racial discrimination in Malaysia's private sector labour markets. We find that Malay graduates face differential treatment when applying for jobs compared to their Chinese counterparts. The mean ratio of Chinese to Malay callback rates, at 5.3, far exceeds the magnitude found in various field experiments in the literature, which mostly fall in the range of 1.0 – 2.0 (see Booth et al., 2011). In those cases minorities are found to be discriminated against, whereas in Malaysia a majority group faces lesser interview prospects due to racial identity. How can we explain these results? Becker's "taste for discrimination" and the concept of statistical discrimination serve as starting points for deducing causes of discrimination. However, the extent to which our study controls for observable representations of formal qualifications, academic attainment, language abilities and cultural affinities attenuate the cogency of these arguments. Taste for discrimination is a residual explanation premised on equal productivity of all groups and on rational firms selecting workers based exclusively on

“productive” characteristics, such that taste for discrimination surfaces solely out of prejudice – which in the long run will be undermined by its unprofitability. Racial stereotype or stigma undeniably explains part of our findings, although this paper cannot empirically inform its contribution relative to other factors.

Preference for Chinese over comparable Malays, while stark, is not readily attributable to racial prejudice, although this cannot be discounted as a motivating factor. Situating this study in the Malaysian socio-political context, specifically racial polarization which begins in schooling and extends to work environments⁸, our findings reflect how language, identity, and culture can exert influence on hiring decisions, particularly in terms of preference for applicants fluent in Chinese among companies predominantly staffed with Chinese workers or companies operating in markets mediated in Chinese language. Indeed, workers’ productivity – or more precisely, work functionality – reasonably rests on facility in the language of the workplace and of business transactions, and is highly pertinent to multi-lingual societies like Malaysia. Considerable preference for Chinese applicants among Chinese-controlled and foreign-controlled companies concur with lingual and cultural compatibility as determinants of callback for interview. Notably, Chinese proficiency impacts positively on interview prospects for both Malays and Chinese. Chinese language proficiency is not only required by Chinese-controlled companies; about 10% of Malay-controlled companies stipulate the same. Our company-level analysis found the effect of Chinese company control on favouring Chinese applicants diminishes after controlling for Chinese language as a job requirement, indicating that language proficiency matters for functional reasons, and does not appear to be a filter to exclude non-Chinese. In sum, our

⁸ Lee (2012) shows that tertiary educated Chinese are substantially more concentrated in the private sector, comprising 56% of private sector professionals compared to 20% of public sector professionals.

findings allow us to attribute a sizable portion of pro-Chinese discrimination and preference for applicants fluent in Chinese to work functionality and cultural compatibility.

The statistical discrimination argument holds that, given a lack or absence of observable traits of applicants, employers will project images onto persons based on their membership of a group and available information or assumptions about that group. The capacity of this study to control for very key characteristics – CGPA, institution, language and technical skills – indicate that a sizable bulk of discrimination observed cannot be attributed to lack of information. Nevertheless, it is possible that employers refer to racial identity as a proxy for unobservable variables. We must emphasize that the discrimination occurs at the selection for interview stage; hence, companies widely precluded Malay applicants from supplementing the limitations of résumés or validating claims, especially about personal strengths and attitudes, and Chinese language proficiency which may be declared on Malay résumés but doubted by employers⁹. Hence, a significant amount of prejudgement takes place.

The wide disparity in callback rates indicates that perceptions of Malay graduates of local universities are considerably unfavourable and entrenched, such that Malay applicants with high CGPA were frequently overlooked, even while lesser achieving Chinese applicants were conveyed to the interview stage. A number of explanations can be proposed: group filtering regardless of résumé qualities, doubts over authenticity of the achievements, past recruitment experience that shapes group perceptions, negative views of the outcomes of affirmative action in education, or outright racial stereotype and prejudice. However, the extent of each one's effect is uncertain and requires further investigation. The outstanding issue of affirmative action must

⁹ Jobstreet, a leading employment portal, surveyed 571 human resource managers in October 2011, and found the following top reasons fresh graduates were rejected after interview: 64% held unrealistic salary demands, 60% showed “bad character, attitude and personality of the jobseekers”, and 56% revealed poor command of English (<http://www.jobstreet.com.my/aboutus/preleases163.htm>).

be handled with circumspection, based on our findings of the effects of degree-granting institution on relative callback rates. Pro-Malay affirmative action is implemented only in public universities, yet Malay graduates of private universities generally face lesser chances of receiving callbacks. Variations across job type are also significant, with Malay graduates of UiTM – an exclusively Bumiputera and Malay institution – relatively favoured over other Malay graduates in engineering jobs, while the converse holds for accounting jobs. Unquestionably, the situation is complex, further underscored by the low callback rate for Malay applicants even to Malay-controlled companies, which depart from the simplistic and rather caricatured notion of Chinese business prejudiced against Malay graduates.

Additional explanations are plausible, from the perspective of employers' practical options and resource constraints. Employers of companies where Chinese form an overwhelming majority of workers may expect that Malay applicants would not take up jobs there, even if interviewed and offered a position. In this regard, company size may impact on the callback decision, since larger companies have more resources and positions or a greater vested commercial or political interest in projecting a representative workforce, but such data are unavailable or incomplete¹⁰. Employers may also surmise that, since Malay graduates have more opportunity in the public sector, they will be disinclined to private sector, which should furthermore serve as a counterbalance of sorts by favouring non-Malays.

¹⁰ Data on size of workforce, the most appropriate measure of company size, are not maintained by Malaysian authorities. Company revenue records are available, but only for one third of the companies in our sample.

6. Conclusion

This study aims to provide an objective and rigorous empirical assessment of hiring racial discrimination in Malaysia's private sector. Our results indicate high levels of racial discrimination, with racial identity exerting a much greater impact on than applicant quality. Malay job applicants are significantly less likely than Chinese applicants to be called for interview, after controlling for applicants' academic achievements and positive attributes, job requirements, and firms characteristics. We find differences in pattern and magnitude of discrimination between job types, with more pronounced racial disparities in engineering jobs, compared to accounting. Our findings also show variations within Malay and Chinese applicants, especially related to language proficiency, language requirements and company profile, underscoring the importance of not viewing race groups not as homogeneous entities and not simplifying labour market interactions, which are far more complex than Chinese companies discriminating against Malay graduates.

The motivations for discrimination are complicated and only conjecturally explained within this framework and the data obtained. Perceptions of Malay graduates are evidently unfavourable, posing deep questions on the quality of education, on affirmative action outcomes and ramifications (both real and perceived), and on deficiencies in inter-group social interaction that may allow such perceptions to become entrenched. At the same time, the significance of Chinese language proficiency and language requirements suggest that social compatibility and work functionality impact on interview prospects. Our results thus engage public policy mainly through highlighting areas for further research that can inform efforts to balance affirmative action and equal opportunity, especially in tertiary education and employment.

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Appendix 1: Racially Distinctive Names

Chinese : Cheong Chun Fai, Ling Jit Lian, Kee Kit Leong, Kenny Fong Kin Wai, Koay Lik Wei, Ng Hock Kin, Goh Weng Seng, Jason Yew Guo Seng, Pang Kok Foo, Wong Wai Han

Malay : Mohd Zaim, Muhammad Akmal, Ahmad Nazmi, Saiful Nizam, Ahmad Asraf, Wan Wan Kuzairi, Khairul Ahmad, Firdaus Salim, Shafie Zainal, Luqkman Hakim

Appendix 2: Sample Resumes

A2.1. Above Average Malay

MOHD HAFIZ BIN HAMZAH
Telephone no: **0133449326**
Email address: **pemuda2020@gmail.com**

PERSONAL INFORMATION

Current address: No. 318, Block G7, Wangsa Maju, Seksyen 8, Setapak, 53300 KL, Malaysia
Gender : Male
Race : Malay
Nationality : Malaysian
Marital status : Single

EDUCATION

Multimedia University, Malaysia
Bachelor of Engineering (Hons.) in Electrical
CGPA: 3.7

Polytechnic Sultan Abdul Halim Mu'adzam Shah, Jitra, Kedah
Diploma in Electrical Engineering

Sek. Men. Teknik Pasir Mas, Kelantan
Sijil Pelajaran Malaysia

EXTRA-CURRICULAR ACTIVITIES

- Participated in softball competition
- Member of Engineering Society

LANGUAGES

Spoken

Bahasa Melayu
English
Mandarin

Written

Bahasa Melayu
English
Mandarin

COMPUTER SKILLS

Proficient in:-

- Microsoft Office (Microsoft Word, Microsoft Excel, Microsoft Power Point)
- AUTOCAD
- Multisim
- Proteus
- PSPICE
- C++

STRENGTHS

- Goal oriented, meticulous and creative
- Strive to achieve both individual and team successes
- Problem solver
- Work well under pressure
- Possess capacity to manage heavy workloads in a time critical environment

References are available upon request

A2.2. Below Average Malay
MOHD KAMAL BIN ISMAIL

Personal Information

Gender : Male
Nationality : Malaysian
Marital Status : Single
Contact No. : +60122552471
Email : warisan1957@gmail.com
Address : SS-15-7, Sri Saujana Apartment, Jln Wangsa 1/4, Taman Wangsa Permai,
52200 Kepong, Kuala Lumpur, Malaysia

Educational Background

Bach in Electrical Engineering
Multimedia University (MMU)
CGPA (2.9)

BTech – Hnd in Electrical and Electronic Engineering
International University College Of technology Twintech (IUCTT)

Certificate in Electrical and Electronic Engineering
Politeknik Ungku Omar (PUO)

Sijil Pelajaran Malaysia
Sek.Men.Teknik segamat (SMTS)

Skills

Computer Skills

- Microsoft (Word, Excel, power point)
- AutoCad
- Mathlab
- C Programming
- Visual Basic
- Microsoft Visio
- Assembly language programming

Communication Skills

- English (writing/speaking)
- B. Melayu (writing/speaking)

Attributes

- Positive thinker
- Eager to learn new technology
- Able to work independently or within team environment
- Ability to work under pressure
- Strong interpersonal and organizational skills

References

Referees are available upon request

A2.3. Above Average Chinese

LEONG WAI SOON

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PERSONAL PARTICULARS
Gender : Male Marital Status : Single Nationality : Malaysian
EDUCATION
Bachelor Degree in Electrical and Electronic Engineering (Hons) Universiti Kebangsaan Malaysia CGPA : 3.2 Matriculation Penang Matriculation College SPM SMK Krian, Parit Buntar, Perak
EXTRACURRICULAR ACTIVITIES
College <ul style="list-style-type: none">• Pesta Tanglung - <i>Committee Member</i>• Malaysia Red Crescent Society - <i>Committee Member</i>• Student's Association - <i>Member</i> High School <ul style="list-style-type: none">• School Prefect - <i>Group Leader</i>• Krian Scout (37th) - <i>Secretary</i>• Anti-crime Society - <i>Treasurer</i>• Chinese Language Society - <i>Committee Member</i>
SKILLS
<ul style="list-style-type: none">• C++• MATLAB• AutoCAD• Microprocessor simulator• MultiSIM• Microsoft Word, Excel, Power Point
LANGUAGES
Language (spoken/written): <ul style="list-style-type: none">• English• Bahasa Malaysia• Mandarin
OTHER INFORMATION
Reference provided upon request

A2.4. Below Average Chinese

Contact Info

Name : Tan Kar Wah
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Mobile No. : 0163877091
Email : hellofinch88@gmail.com

Personal Particulars

Nationality : Malaysian
Gender : Male
Marital Status : Single

Education

Kolej Bandar utama
Bachelor of engineering (HONS) Electrical & Electronic Engineering
CGPA – 2.8

Computer Skills

- ✓ C++, C
- ✓ Java programming
- ✓ Microsoft Office: Word, Excel, power point and project

Languages

Speak/write:
✓ English
✓ Mandarin
✓ Malay

Personal Strengths

- ✓ Good personal communication skills

Referee

- ✓ Available upon request