MYTH BUSTING RURAL LABOUR SHORTAGES. A MARKET SEGMENTATION APPROACH REVEALS NEW RECRUITMENT OPPORTUNITIES.

Elizabeth Hemphill
Ehrenberg-Bass institute for Marketing Science, School of Marketing, University of South Australia, 70 North Terrace, GPO Box 2564 Adelaide, South Australia, 5001, Australia. Email: Elizabeth.hemphill@unisa.edu.au

Carol T. Kulik
Centre for Human Resource Management, School of Management, University of South Australia, 70 North Terrace, GPO Box 2564, Adelaide, South Australia, 500, Australia.

ABSTRACT: This study examines two regional meat processing plants (MPPs) whose recruitment strategies have failed to meet staffing needs. Using regional population and workforce survey data, this study applies attribute trade-off analysis to segment the regional labour market and two participating MPP workforces on the basis of individuals' job attribute preferences. The analysis finds that, although both MPPs attract employees with a preference for family support attributes, only one MPP attracts employees equally likely to value family attributes as organisation/job attributes. The findings indicate that MPPs currently fail to fully utilise 33% of the regional workforce that would consider MPP jobs. Regional workers could be recruited separately from the segments of the regional labour market that favour family support attributes (30% of respondents), spouse support attributes (38% of respondents) and/or organisation/job attributes (32% of respondents).

KEYWORDS: human resource management, labour shortfalls, market segmentation, rural recruitment

1. INTRODUCTION

Attracting workers to some jobs is particularly difficult such as general practitioners to rural medical practices (Humphreys et al., 2001) and meatworkers to meat processing plants (MPPs) (Kidane, 2003; Kandel and

Parrado, 2005). Integrating the human resources management and marketing literatures suggests that re-conceptualising potential job applicants as 'consumers' with differentiated needs and interests may stimulate new creative recruitment strategy design. When consumers are a heterogeneous group, organisations relying on 'one-size-fits-all' recruitment ads will be less successful in attracting job applicants than organisations engaging in customised advertising activities that directly address the differentiated needs and interests of specific consumers (Bennett, 2007).

The concept of market segmentation hinges on a seller identifying and understanding the segments that constitute the larger market of consumers, i.e. the seller must know who the customers are. A market segment is a homogenous group of consumers (Grover and Srinivasan, 1987) with a systematic and predictable response to sellers' differentiated signals. Recruitment messages that are tailored to the needs of a particular workforce segment (e.g., young white working class males) arouse more interest in members of that segment (Bennett, 2007). The challenge for organisations, however, is identifying distinctive segments of the market that can be exploited in recruitment activities (McDivitt, 2003).

In many countries meat processing is a decentralised (Novek, 1989), high-growth industry (Thorpe, Warr and Andrews, 2007) with location bound (immobilised) (Chavda, 2004) MPPs located in rural or regional locations (Jerrard et al., 2008). Despite offering plentiful jobs in regional areas (Jerrard et al., 2008) with higher average pay than their urban counterparts (Gilbert, Phimister and Theodossiou*,* 2003), MPPs struggle to maintain a workforce sufficient to meet market demand. With some MPPs experiencing 100% annual labour turnover (Stanley, 1992), enormous strain is placed on skill supply from local labour pools (Glaeser and Resseger, 2010). MPPs are increasingly turning to international recruiting (Lloyd and James, 2008) but this has not generated a sustainable MPP workforce (Department of Immigration, 2010).

More innovative recruitment strategies are needed to meet MPPs' recruitment challenges – particularly strategies that enable rural MPPs to better utilise their regional labour markets (Gabhainn, Murphy and Kelleher, 2001). The overarching need to improve recruitment outcomes drives the research question addressed in this study: Can regional organisations improve recruitment outcomes in their regional labour markets? Despite government

requirements that recruitment of international workers be pursued only in conditions of local skill shortage (Evans, 2010), international recruitment appears to be a preferred recruitment strategy (Lloyd and James, 2008).

2. THE REGIONAL RECRUITMENT CHALLENGE

We examine the recruitment challenge faced by organisations in rural and regional Australia. We adopt the approach used by other researchers such as Pickup and White (2003) to contrast urban, regional and rural settings on the basis of population size and distance from urban centers (Barter, 2008). This article is a result of field investigations conducted in Australia. Australia is one of the largest exporters of processed meat in the world, exporting 46% of its national MPP production (Kidane, 2003). The remote location of processing plants, the seasonality of meat processing work, and thin local labour pools converge to present MPPs with a significant recruitment challenge (Jerrard et al., 2008).

The data come from the south-east region of South Australia which may not be fully representative of rural Australia. However, the region serves as an illustrative case study. The techniques we use can be applied to other regional labour markets and/or to other industry sectors. Generally speaking, South Australia has experienced a decline in population and employment participation common to other southern states of Australia (Baum, O'Connor and Mitchell 2010). More specifically, regional and rural South Australia displays higher employment participation rates than metropolitan Adelaide. For January-May 2011, the unemployment rate in urban Adelaide was 5.6, compared to 5.1 for northern and western regional South Australia and 5.3 for southern and eastern regional South Australia (Workforce Information Service, 2011). Southern and eastern South Australia has seen participation losses in the 15 to 24 and 25 to 44 age groups, cohorts from which MPPs recruit (Jerrard et al. 2008).

Our first subsample is the regional workforce of Mount Gambier. Mount Gambier has a population of 24,000 providing infrastructure for a surrounding population of up to 32,000 (Mount Gambier Tourism, 2009). The town is situated near the border of South Australia and Victoria, adjacent states accounting for 32.69% of Australia's total population (ABS 3101.0, 2008). We use a second subsample consisting of two participating MPP organisations in rural towns of South Australia. One organisation processes

lamb (Organisation Lamb) and the other processes beef (Organisation Beef).Organisation Lamb is situated in Naracoorte (population 2700), 270 km south east of South Australia's capital city (Adelaide) and 182 km from Mount Gambier. Organisation Beef is situated in Bordertown (population 4636), 336 km south east of Adelaide and 102 km from Mount Gambier. See Figure 1 for these locations.

These MPPs face a particularly complex recruitment challenge, one element of which is labour scarcity. Public officials in the region claim *very* low unemployment (Tatiara, 2010), a situation exacerbated by urban reluctance to fill regional jobs (Bacolod, Blum and Strange*,* 2010; Stockdale, Findlay and Short*,* 2000). Regional firms are forced to compete for workers in small labour markets (Pavis, Hubbard and Platt*,* 2001) or to adopt strategies to import workers such as offering bonded university placements for students from urban areas to work rurally (Benzie, 2003) or recruiting applicants internationally (Gilles, Walkerman and Dury*,* 2008; Lloyd and James, 2008). Despite achieving a good level of success with overseas recruitment (Lloyd and James, 2008), MPPs struggle to keep up with worker churn (Martins, 2008). We suggest that regional MPPs therefore need to develop especially creative recruitment strategies with which to source and retain workers to meet production demand.

Human Resource Management (HRM) literature suggests that retention of workers is related to the expectations set up in recruitment processes (Premack and Wanous, 1985). The realistic job preview literature has evolved recognising the role of communication with potential applicants for both recruitment and retention (Wanous, 1989; Breaugh, 2008). Targeted communication messages by organisations can encourage applicant self-selection for participation in recruitment processes (Morgeson and Ryan, 2009) by stimulating perceptions of opportunities for job applicant/organisation fit (Cable and Judge 1996; Lievens and Highhouse, 2003). However, this literature emphasises the role of individual attitudes toward job attributes without specifically acknowledging the heterogeneity of applicant attitudes in a single labour market.
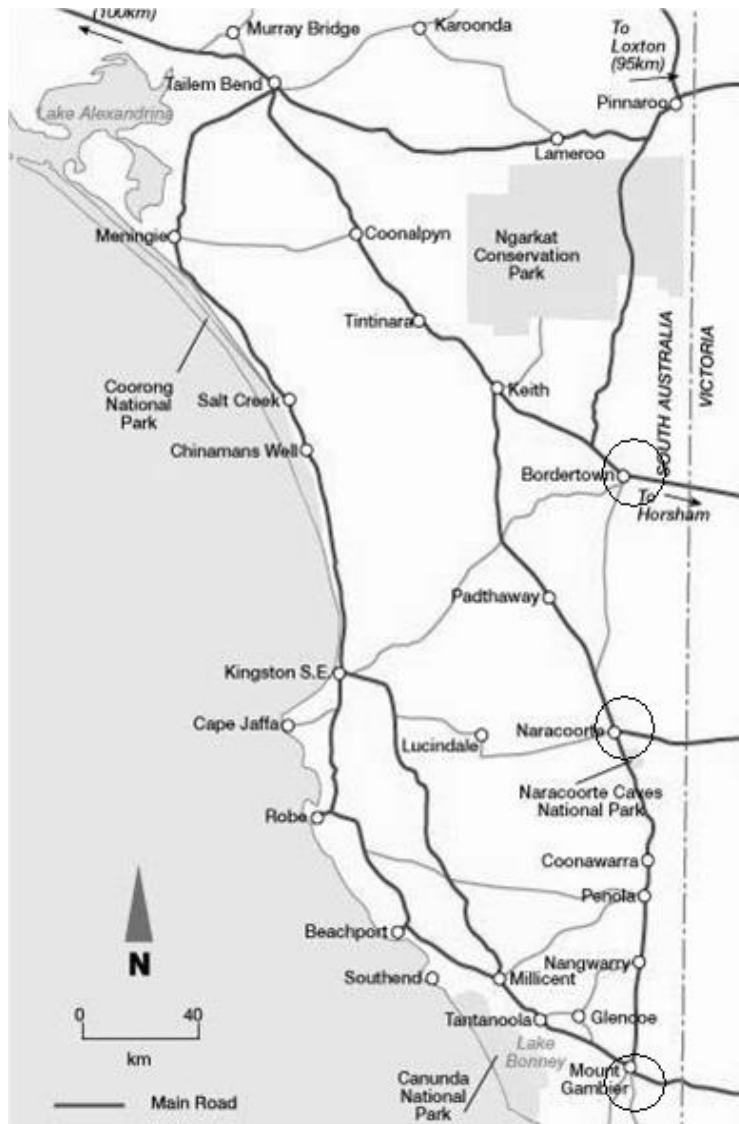
Figure 1. South Eastern Region of South Australia. Source:Coastshop (2010).

Integrating findings from the HRM literature with a marketing perspective might enable organisations to generate creative strategies for sourcing workers from a regional labour pool (Hemphill et al*.,* 2007). Rather than relying on 'one-size-fits-all' recruitment strategies, MPPs ('sellers') could target potential MPP workers ('consumers') through relationship development activities that directly address potential job applicants' diversity in what they seek in a job (Ehrhart and Ziegert, 2005). Applying the marketing concept of segmentation, MPP workers are 'consumers' that are explicitly differentiated in their needs and interests (Kohli and Jaworski, 1990). MPPs could attract individuals to specific jobs by positioning themselves, and their jobs, with greater care (Gatewood, Gowa and Lautenschlager*,* 1993), i.e. targeting specific segments of the local labour market that value their job offerings.

Employers can distinguish themselves from competitors through organisation branding. In recruitment campaigns, branding involves emphasising the employer's unique attributes and targeting potential applicants who value those particular attributes (Breaugh, 2008). The central concept of branding is directly applicable when the 'product' is a job (Martin et al*.,* 2005). Branding is particularly important in saturated markets in which competition necessitates distinguishing one offering from another (Hollands and Chatterton, 2003). By creating a unique, favourable brand image in consumers' minds, organisations increase the likelihood that their offerings will be chosen over competitors' offerings (Collins and Stevens, 2002). Organisations, particularly those that are understaffed (Mathews and Redman, 1998), can utilise a 'brand' to attract workers by influencing associations that prospective employees make between the organisation and the specific components or attributes of the employment experience (Davies, 2008). Building differentiated consumer preferences into recruitment activities can suggest 'fit' between the unique attributes offered by an organisation 'brand' and a worker's personal needs and interests (Lievens and Highhouse, 2003; Rafaeli, 2006).

Organisations trade-off the information they present to the labour market in recruitment materials (Feldman, Bearden and Hardesty*,* 2006). Some attributes of jobs (for example, high pay) and organisations (for example, fair treatment of employees) may be universally valued by prospective job applicants (Breaugh, Macan and Grambow*,* 2008). However, other attributes

are valued more or less by distinct groups in the labour market, and branding based on these attributes enables job applicants to identify those employers that provide the best person-job/organisation fit (Feldman et al*., 2006; Kristof-Brown, Zimmerman and Johnson, 2005; Roberson, Collins and Oreg, 2005).

Market Segmentation in Recruitment Strategy

Descriptive variables such as country of origin (Johansson and Thorelli, 1985), gender (Konrad et al., 2000), age, occupation, level of education, qualification, income (Webster, 1989), experience and work type are typically emphasised in segmentation studies.Goldberg (2003) finds fit between recruiters and applicants on these types of variables to be influential in attracting applicants to a job. But many of these variables are not useful for defining distinctive segments with systematic and predictable responses to sellers' signals (Spence, 1976) that can be exploited in recruitment activities (McDivitt, 2003). Even if viable segments could be identified, legislation prohibits recruitment and selection on the basis of many of these variables (for example, age and gender) (Kohl, Stephens and Chang, 1997). An alternative strategy for market segmentation is to consider consumers' values and lifestyle preferences (Hollands and Chatterton, 2003). Building consumers' product preferences (i.e. things about a job and/or organisation that might be attractive to groups of potential employees) directly into recruitment advertising could demonstrate 'fit' between the unique attributes offered by an MPP and a potential MPP worker's personal needs and interests (Cable and Judge, 1996; Rafaeli, 2006).

Recruitment Market Segment Attributes

The organisational recruitment literature has identified a wide array of attributes that are important to prospective job applicants (Boswell et al., 2003). Slaughter, Richard and Martin (2006) describe Konrad et al.'s (2000) work as the most comprehensive; they added only interesting work and dress code to Konrad et al.'s (2000) attribute list which included income, challenging work, opportunity for leadership, work hours, power and authority, easy commute, opportunities for promotion, geographic location,

freedom and autonomy, co-workers, prestige and recognition, and supervisor.These attributes have been used in recruiting a variety of populations to different occupations in regional areas, such as attracting general practitioners to understaffed medical practices (Duplantie, Giagnon and Landry*, 2007).

Attribute lists have been subsumed by more succinct typologies in various research studies (e.g. Humphreys and Rolley, 1998) for the purpose of overcoming recruitment challenges for regional firms. Hemphill and Kulik's (2009) typology has been used to identify new recruitment opportunities by segmenting a labour market into distinct segments of workers on the basis of Job, Family support and Organisation factors. Job factors include details of the job offering (e.g. opportunities offered to develop or practice skills; Pathman et al.*,* 2004). Family support factors include details such as work opportunities available at the job's location for spouse or partner (Humphreys et al.*,* 2001). Organisation factors include details about the hiring organisation such as its governance and structure (Rafaeli, 2006). This attribute typology might be useful in determining how best to attract local workers to job openings at regional MPPs.

When attribute lists are presented to job applicants, applicants are likely to describe all of those attributes as important or attractive. But job choice decisions are frequently non-compensatory decisions that are driven by only a few key attributes. Organisations that provide these key attributes may be seen as desirable places to work, even if the applicant has to trade-off other attractive attributes. 'Best-worst' choice studies provide a strategy for identifying these key attributes. Respondents consider attributes in small sets (e.g., 4 attributes at a time) and select a most preferred and least preferred option from the attribute set (Flynn et al.*,* 2007). These choice studies force respondents to trade-off the attributes to identify the most or least important option. An applicant's decision about the overall value of a job in a particular organisation is ideally suited to such a trade-off analysis (Slaughter et al.*,* 2006). Attribute preferences might be similar within groups of potential meat processing workers but different between segments.

Although workers within different industries (professions) exhibit different preferences for job attributes, little work has been done to identify characteristics of segments within specific labour markets (Chavda, 2004).Attribute preferences could serve as a mechanism for job applicant

self-selection (Ryan and Tippins, 2004) if individuals are attracted to a position through targeted recruitment that highlights particular 'bundles' of attributes (Breaugh, 2008). Attributes emphasised in recruitment activities can establish a bond between potential workers and an organisation (Feldman et al.*, 2*006) to generate applicant pools of candidates which 'fit' with the organisation (Rafaeli, 2006).

   This literature leads us to three propositions for our study. First, a regional labour market would consider MPP jobs. Empirical investigation of this proposition will reveal the degree to which MPPs might be able to draw job applicants from nearby locations, i.e. busting the myth of labour scarcity for rural MPPs. Second, a regional workforce can be segmented on attributes of preference rather than more conventional segmentation variables such as level of education, qualification, experience, work type, gender and age.Empirical investigation of this proposition will reveal how MPP recruitment materials should be designed to generate job applicants from a regional work force. Finally, regional workforce and existing workforce attributes preference segments offer recruitment possibilities for MPPs. Empirical investigation of this proposition will reveal how the interests of current workers should be included in recruitment materials to target applicants that will 'fit' with existing workers to sustain rural workforces.

3. RESEARCH METHODOLOGY

The field work for this project was granted approval in 2008 by the Human Research Ethics Committee at the researchers' academic institution prior to data collection.

Survey Development

We developed a survey for the meat processing industry based on three focus group discussions with meat processing workers from the two participating organisations. Discussion group participants were recruited by the human resource manager of each organisation who posted an invitation in the workers' lunch room. Participants were provided with refreshments and a $30 supermarket voucher. These discussions were held in July 2008, lasting between 1 and 2 hours each. The three discussion groups included 6 workers from Organisation Lamb, 14 workers from Organisation Lamb, and 16

workers from Organisation Beef. The discussions reviewed three important methodological issues. First, what meat processing workers consider important in choosing a meat processing job was discussed at length to identify appropriate attributes to include in the survey. Second, wording of survey items was discussed to ensure items would be understood by survey participants. Third, because the survey was to ask participants to select the best and worst attributes from a small set of attributes, we discussed the number of attributes an MPP worker could consider in multiple sets. The survey could then be designed with a sufficient number of sets to correctly examine the attributes identified by the MPP workers (Louviere et al., 2008). Our survey contained 16 attributes, with 20 sets of 4 attributes in a partially balanced incomplete block choice design described fully in the following section titled Survey Instrument.

   Meat processing industry stakeholders (two government representatives from Primary Industry and Resources of South Australia, the Meat Workers Union Secretary and one private HRM consultant to the industry) were consulted to review the survey. No incentives were offered for these consultations. These stakeholders confirmed the surveys were appropriate for meat processing workers prior to final printing and data collection.

Sample

The first subsample consisted of participants randomly selected from the public telephone directory in the largest population centre in the region of Organisation Lamb and Organisation Beef. Participants were eligible to participate based on their working age (over 18 years of age) and working status (currently working or looking for work). 508 people over the age of 18 currently working or interested in working in the region were invited to participate in a telephone survey; 266 people participated (a response rate of 52.36%). Participants' names were entered into a lottery to win one of 10 x $50 supermarket vouchers. 61% of this subsample were female and the average age was 46 years old (SD=12.00).

The second subsample consisted of MPP workers currently employed at Organisation Lamb and Organisation Beef. Organisation Lamb employs 450 workers spread equally across two shifts and Organisation Beef employs 300 people spread across two shifts. We used a non-probablistic sampling method

to survey workers in July/August 2008 (the low season of production). 238 meat processors completed surveys in their MPP canteens on their meal breaks giving us a response rate of 34% (238/750).   32% of survey participants were female and the average age was 34 years old (SD=11.79). Each worker completing a survey received a $30 supermarket voucher in appreciation.

Survey Instrument

The survey contained descriptive variables often used in recruitment ads (e.g. highest qualification, level of education, work type and experience), demographic variables (e.g. gender, income and age) and one question for subsample 1 (regional centre participants) to ask if they would consider a job in the meat processing industry (1=yes, 0=no).

The survey asked respondents to consider 16 attributes in 20 small sets (4 attributes at a time). Respondents chose one attribute from each set as the most important attribute for a new meat processing position and a second attribute as the least important attribute. Each attribute appeared in 5 sets, so every attribute had an equal chance of being selected as most or least important compared to every other individual attribute (Prescott and Mansson, 2002; Sharma 2000). Specific attributes included in the survey were grouped under *Job, Family* and *Organisation* category headings from Hemphill and Kulik's (2009) typology. *Job attributes* included: Liking the work I would do on the job; Being safe at work, not getting injured; Liking the people at work, socialising outside work; How much income I can earn from the job; Continuity of work; Being respected at work (spoken to and treated nicely at work by other people); Being allowed to choose the hours I want to work; and Doing several different kinds of work as part of the job.*Family attributes* included: Spouse/partner employment opportunities at the meat works location; Good schools for the children at the meat works location; The availability and affordability of housing at the meat works location; How far the job is from family and friends; and Opportunities to take the length and type of paid leave convenient for me and my family.*Organisation attributes* included: Having a career path in that meat works; Learning new skills; and Moving to a similar job at a different location for the same meat works.

We retained these attribute groupings from Hemphill and Kulik (2009) but three attributes were modified for the MPP worker context. In our discussion groups, the MPP workers described one Family attribute (The availability of lifestyle related activities at the job's location) as insignificant in their job choice decisions, i.e. other attributes were of greater importance. Two Organisation attributes (The organisation's invoicing philosophy and The requirement/opportunity to buy into ownership of the organisation) were described as irrelevant in their job choice decisions. Of greater importance to MPP workers were two Job attributes (Continuity of work and Being safe at work, not getting injured) and one Organisation attribute (Having a career path in that meat works). The following sections present results of our survey work, discussion of their implications and a direction for future work to assist regional and rural organisations meet their recruitment challenges.

4.Would Workers in Regional Labour Markets Consider MPP Jobs?

33% of the survey participants in subsample 1 indicated they would consider an MPP job with 1% of survey participants already working in an MPP. Table 1 reports descriptive variables for all subsamples in this study.
We conducted a one-way analysis of variance (ANOVA) to identify significant differences in the likelihood participants would consider MPP work across segments of the workforce on the basis of descriptive variables traditionally emphasised in recruitment ads (e.g. qualification, level of education, work type, income and experience). The ANOVA revealed no significant differences across level of qualification ($F(5,260) = 1.20.$ p = n.s.), level of education ($F(6, 259) = 1.17$, p = n.s.), work type ($F(4,226) = .89$, p = n.s.), income ($F(9,256) = 1.08$, p = n.s) and experience ($F(5,214) = 1.11$, p = n.s). We also conducted independent samples t-tests to identify significant differences in the likelihood participants would consider MPP work on the basis of gender and age. These t-tests revealed no significant differences across gender ($t=1.43$, p = n.s.) or age ($t=1.46$, p = n.s.).

	Regional market (n=266) %	Would consider MPP jobs (n=88) %	Org Beef (n=128) %	Org Lamb (n=110) %
Gender				
Female	61.3	55.2	34.9	29.4
Highest qualification				
High School Certificate	29.7	31.0	26.9	33.0
Technical Certificate	23.7	21.8	27.8	35.1
Traineeship	1.9	9.2	26.9	9.3
Apprenticeship	5.6	19.5	12.0	16.5
Academic (University)	21.8	18.4	2.8	3.1
Other	17.3	31	3.8	3.1
Highest level of education				
Primary school	0.8	28.7	42.1	3.8
Some high school	24.4	32.2	42.1	53.8
High school certificate	27.8	24.1	15.1	31.1
Some higher education	24.8	5.7	0.8	9.4
Bachelor degree	9.0	6.9	42.1	0.9
Postgraduate studies	7.5	2.3	0.0	0.9
Other	5.6	28.7	0.0	0.0
Work type				
Permanent	55.4	52.2	90.6	82.6
Casual	15.2	15.9	5.5	1.8
Self employed	15.2	20.3	0.8	0.9
Contract	8.2	8.7	3.1	11.9
Other	6.1	2.9	0.0	2.8
Income				
$10,000 to less than $20,000	9.2	13.1	10.3	6.5
$20,000 to less than $30,000	20.0	26.3	11.1	19.4
$30,000 to less than $40,000	13.2	11.4	19.8	37.0
$40,000 to less than $50,000	15.2	11.4	28.6	21.3
$50,000 to less than $60,000	14.1	14.7	23.0	10.2
$60,000 to less than $70,000	12.7	9.9	5.6	5.6
$70,000 to less than $80,000	9.7	6.6	0.8	0.0
$80,000 or more	5.8	6.6	0.8	0.0
Experience				
0-5 years	38.2	42.2	67.2	68.0
6-10 years	21.8	26.6	31.1	15.5
11-15 years	10.0	4.7	0.0	8.7
16-20 years	11.4	9.4	0.0	4.9
21 – 25 years	9.5	6.3	0.8	2.9
More than 25 years	9.1	10.9	0.8	0.0
Current job				
Carer/Nurse/GP/ Ambulance/Community Services	14.5	13.2	20.3	6.5
Administration/office work	13.6	5.9	7.8	23.1
Schools/education	11.8	8.8	2.3	0.9
Labourer/Manual/Driver/Factory	11.8	13.2	0.8	1.9
Sales/Retail/shop	7.5	2.9	9.4	10.2
Trade	7.5	16.2	0.0	0.0
Farmer	6.1	8.8	20.3	26.9
Accounts/finance/tax/bank	5.7	8.8	18.8	13.0
Timber	3.1	1.5	0.0	0.0
Mechanic	1.3	1.5	20.3	17.6
Meatworks	1.3	1.5	0.0	0.0
Other	15.8	17.6	0.0	0.0
Age				
Mean *(Std Dev)*	45.6 yrs *(12.0 yrs)*	44.0 yrs *(11.9 yrs)*	33.3 yrs *(12.0 yrs)*	34.9 yrs *(11.5 yrs)*

Table 1. Regional Labour Market and MPP Data Descriptive Variables.
Source: the Authors.

However, participants did vary across current job in their likelihood to consider MPP jobs $(F(11,216) = 2.06, p= 0.03)$. Participants in trades (n=17, 65% would consider MPP work), farming (n=14, 43% would consider MPP work) and accounts (n=13, 46% would consider MPP work) were most likely to consider MPP jobs. Thus, the regional workforce does contain workers that would consider MPP jobs, irrespective of gender, qualification, education, work type, income, experience and age; these workers are most likely to be currently employed in trades, farming and accounts. These occupations have characteristics consistent with several MPP jobs, i.e. maintenance (trades), meat processing (farming), and book keeping (accounts).

5. A REGIONAL LABOUR MARKET CAN BE SEGMENTEDONTHE BASISOF JOB ATTRIBUTE PREFERENCE.

After establishing that there were workers in the subsample who would consider MPP jobs, we examined the job choice decisions of workers in a specific regional center to determine the recruitment potential for MPPs from that region. Analysis was performed on the most-least important attribute data by calculating the number of times a participant chose each attribute as the most (M) and least (L) important attribute (Mueller and Rungie, 2009). From here we will refer to this as our most-least important attribute data or analysis. The relative importance of attributes can be more easily interpreted when the M and L scores are standardised to create a probabilistic ratio scale. This ratio scale is derived by transforming the square root of M/L to a 0 to 100 scale such that the most important attribute with the highest square root (M/L) becomes 100. The attributes can then be compared using their relative ratios. For example, an attribute half as likely to be chosen as important would have a relative ratio of 50. These relative ratios distinguish the most important attributes from the less important ones. The column headed Regional Data in Table 2 reports the attribute preferences in the regional labour market.

Two observations can be made from considering the attribute preferences across this subsample. First, the top four attributes are very closely positioned, Liking the work I would do on the job (relative ratio of 100), Spouse/partner employment opportunities at the meat works location

(relative ratio of 92), Being safe at work, not getting injured (relative ratio of 81), and Good schools for the children at the meat works location (relative ratio of 81). Second, there is a wide spread in the relative ratios of the other 12 attributes. As a single undifferentiated group, the regional labour market agrees on the value of only a few attributes from the Family and Job attribute groups. This evidence suggests that a segmentation analysis might be useful in identifying segments that place greater or less value on the remaining attributes.

Table 2. Regional Labour Market Attribute Preference Segments. Source: the Authors.

	Regional Data (N=266)	Segment 1 (n=102) 38%	Segment 2 (n=85) 32%	Segment 3 (n=79) 30%
Job attributes				
Liking the work I would do on the job	100	15	**100**	31
Being safe at work, not getting injured	81	*10*	60	**68**
Liking the people at work, socializing outside work	42	*9*	**48**	11
How much income I can earn from the job	39	*6*	**42**	16
Continuity of work	34	*3*	**33**	25
Being respected at work (spoken to and treated nicely at work by other people)	27	*3*	**29**	16
Being allowed to choose the hours I want to work	26	*4*	**23**	15
Doing several different kinds of work as part of the job	13	*2*	**16**	4
Family attributes				
Spouse/partner employment opportunities at the meat works location	92	**100**	26	**100**
Good schools for the children at the meat works location	81	*23*	77	27
The availability and affordability of housing at the meat works location	27	*2*	16	**38**
How far the job is from family and friends	27	*3*	17	**23**
Opportunities to take the length and type of paid leave convenient for me and my family	27	*2*	17	**42**
Organization attributes				
Having a career path in that meat works	44	*5*	**39**	34
Learning new skills	35	*5*	**38**	12
Moving to a similar job at a different location for the same meat works	24	*2*	12	**39**

Note, **bolded** relative ratios represent the segment placing the most importance on a given attribute; *italicized* relative ratios identify the segment placing the least importance on that attribute.

We identified homogenous groups of survey participants using latent class clustering (LCC) software (LatentGOLD®). Although there is no single agreed-upon criterion for identifying the optimal number of latent classes in these analyses (Nylund, Asparouhov and Muthén, 2007), a low Bayesian Information Criterion (BIC) indicates a well-fitting model (Muthén and Muthén, 2000). Table 3 reports the BIC values associated with LCC solutions ranging from two clusters to four.

Table 3.Latent Class Cluster Solution Comparisons. Source: the Authors.

Subsample	Number of CCs in solution	LCC sizes (Number in segment)				BIC
		Segment 1	Segment 2	Segment 3	Segment 4	
Regional Data (N=266)	2	187	79	n/a	n/a	18950.47
B/W attributes	3	102	85	79	n/a	18935.58
	4	81	79	62	44	18958.27
MPP worker data	1	238	n/a	n/a	n/a	16076.32
(N=238)	2	84	154	n/a	n/a	16032.70
B/W attributes	3	124	67	47	n/a	16055.36
	4	122	45	41	30	16122.74

We adopted the three LCC solution because it is associated with the lowest BIC value. Market segmentation is most effective when the segments' differentiated values, tastes, or preferences suggest that they will respond differently to different advertising messages (Yankelovich and Meer, 2006). The three LCC solution classifies regionally situated workers into three homogenous segments with clearly differentiated preferences.
Table 2 reports the segmentation of the regional labour market derived from the attribute relative ratios for the three LCC solution. Bolded relative ratios in Table 2 identify the segment placing the most importance on a given attribute; italicised relative ratios identify the segment placing the least importance on that attribute. Of the 266 cases in the dataset, the LCC analysis allocated 38% to Segment 1 (n=102), 32% to Segment 2 (n=85) and 30% to

Segment 3 (n=79). Segments 1 and 3 both emphasise Family attributes. However, Segment 1 focuses almost solely on spousal work opportunities with little regard for other family attributes, whereas Segment 3 demonstrates concern for a larger range of family attributes. Segment 2 exhibits most concern for attributes of the job and the organisation.

We conducted a one-way analysis of variance (ANOVA) to identify any significant differences across segments in their likelihood to consider MPP work. The ANOVA revealed no significant differences across the three segments (F (2, 263) = .96, p = n.s). Members of the three segments were equally likely to consider MPP work, suggesting that all three segments are viable segments for MPP recruiting efforts.

We also conducted a one-way analysis of variance (ANOVA) to identify significant differences in attribute preference segments of the workforce on the basis of variables traditionally emphasised in recruitment ads (Table 1). We found no differences in any variables including level of qualification (F(5,260)=2.16, p=n.s.), education (F(6,259)=.31, p = n.s), work type (F(4,226)=1.00, p = n.s), experience (F(5,214) = 1.20, p = n.s) and current job (F(11,216) = .94, p = n.s) suggesting that job attribute preferences based on trade-off analysis offer an approach to segmentation that highlights differences obscured by other descriptive variables.

6. REGIONAL LABOUR MARKET (SUBSAMPLE 1) AND EXISTING WORKER (SUBSAMPLE 2) ATTRIBUTE PREFERENCE SEGMENTS OFFER MPP RECRUITMENT OPPORTUNITIES.

We examined the attribute preferences of MPP workers to reveal current recruitment strategies and to identify recruitment strategy opportunities. Analysis performed on these data was the same as that performed on regional worker data and is described in the previous section. Attributes were compared using their relative ratios which distinguish the most important attributes from the less important ones. The column headed All MPP Workers in Table 4 reports attribute preferences among MPP workers. As a group, MPP workers consider job attributes of most importance when considering a new job; the five highest-rated attributes are all in the Job category.

Table 4.MPP Worker Job Attribute Preferences. Source: the Authors.

	All MPP workers (N=238)	Segment 1 (n=84) 35%	Segment 2 (n=154) 65%
Job attributes			
Liking the work I would do on the job	41	**93**	24
Being safe at work, not getting injured	79	**100**	61
Liking the people at work, socializing with them outside work	21	**21**	17
How much income I can earn from the job	100	7	**100**
Continuity of work	46	32	**44**
Being respected at work (spoken to and treated nicely at work by other people)	52	**52**	41
Being allowed to choose the hours I want to work	18	10	**18**
Doing several different kinds of work as part of the job	25	**31**	15
Family attributes			
Spouse/partner employment opportunities at the meat works location	20	4	**27**
Good schools for the children at the meat works location	23	10	**29**
The availability and affordability of housing at the meat works location	28	14	**31**
How far the job is from family and friends	25	15	**25**
Opportunities to take the length and type of paid leave convenient for me and my family	17	9	**17**
Organization attributes			
Having a career path in that meat works	26	**28**	20
Learning new skills	36	**34**	24
Moving to a similar job at a different location for the same meat works	13	**13**	11

Note, **bolded** relative ratios represent the segment placing the most importance on a given attribute.

Two observations can be made from considering the attribute preferences across current MPP workers. First, the top two attributes are very closely positioned: How much income I can earn from the job (relative ratio of 100) and Being safe at work, not getting injured (relative ratio of 79). Second, there is a wide spread in the rankings of the other 14 attributes. As a single undifferentiated group, meat processors agree on the value of only a few attributes from the Job attribute group. This evidence suggests that a segmentation analysis might be useful in identifying segments that place greater or less value on the remaining attributes.

Table 4 reports the BIC values associated with LCC solutions ranging from one cluster to four clusters. We adopted the two LCC solution for this subsample because it exhibited the lowest BIC. The two LCC solution classifies MPP workers into two homogenous segments with clearly differentiated preferences. Of the 238 participating MPP workers in this subsample the LCC analysis allocated 35% to Segment 1 (n=84) and 65% to Segment 2 (n=154). LCC details for the segments are reported in Table 4. Bolded relative ratios identify the segment placing the most importance on a given attribute. Both segments have a strong emphasis on job attributes. However, Segment 2 places greater importance on family attributes than Segment 1. Segment 1 exhibits a broader focus on job attributes (with greater preference for 5 of the 8 job attributes) and greater emphasis on organisation attributes than Segment 2.

We conducted an independent sample t-test to see if segment membership varied between Organisation Lamb and Organisation Beef. Segment membership did vary (t (236) = -3.28, p < .001). Organisation Lamb workers were more likely to belong to Segment 2 (75%) than Segment 1 (25%) (χ^2 = 28.51, p<.001) and Organisation Beef workers were equally likely to belong to *either* Segment 1 (45%) or Segment 2 (55%) (χ^2=1.53, p= n.s.).

Organisation Lamb's current recruitment strategies are more successful in attracting Family focussed workers, whereas Organisation Beef's strategies are successful in recruiting either Job/Organisation- or Family-focussed workers. Identification of *three* segments in the regional labour market suggests that both organisations are missing part of the available market. Tapping into the underutilised segments of the market could provide new recruitment opportunities for both MPPs.

MYTH BUSTINGTHE RURAL LABOUR SHORTFALL

Academic evidence strongly suggests recruitment is a major challenge for regional organisations around the world (Campbell, 2006; Duplantie et al., 2007). New and innovative recruitment initiatives are required. Australia has tackled the common problem of attracting workers to regional locations in some industries by recruiting migrant workers from international labour markets (e.g. Lloyd and James, 2008; Gilles et al*.,* 2008). But these mechanisms have not yet remedied the insufficient worker levels in regional communities with specific labour needs (Lloyd and James, 2008). This paper suggests a new approach to regional recruitment derived from the bridging marketing and HRM literatures.

First, we suggest reframing the rural and regional recruitment challenge of labour scarcity. MPPs do not necessarily have to rely on international labour but may choose to do so. We have shown that regional labour market segments present local recruitment opportunities for MPPs to recruit workers who 'fit' for MPP worker retention. Understaffed MPPs may be able to attract workers by explicitly recognising the importance of 'selling' their product (jobs) to specific groups of 'consumers' (prospective job applicants) in the regional labour market. MPPs should identify a consumer-valued 'bundle' of attributes offered by the MPP and design recruitment activities to develop an association between this bundle and the organisation's 'brand.' Recruitment advertising, for example, can describe the attributes contained in the bundle so that members of the labour market recognise the value of that organisation's job offering. However, because attribute bundles are not equally valued by all segments of the consumer market, it is important that a recruiting firm understands the differentiated preferences of the labour market and targets its recruiting activities to those segments that value the particular attribute bundle the organisation can offer. Firms that fail to present distinct brands, but instead appear similar to one another (Backhaus, 2004), are not taking advantage of well established marketing knowledge in which branding acts as a mechanism for distinguishing between competitors in a marketplace (Rothschild, 2001).

Second, our results revealed two distinct recruitment options for understaffed MPPs. One option is to design recruiting strategies that target members of a single segment. Organisations could adopt recruitment strategies targeting

family-, job- or organisation-focused workers in the regional centre. In order to successfully pursue a single-segment recruiting strategy, an organisation's recruitment materials need to emphasise only those attributes of greatest concern to the target segment. This will differentiate the organisation from alternative employers and generate a competitive advantage in the labour market (Berthon, Ewing and Hah*,* 2005).

This single-segment strategy is displayed by Organisation Lamb; 76% of participating workers from Organisation Lamb report a clear preference for family support attributes. Organisation Lamb's brand is associated with a favourable family-friendly image, attracting members of a family-focused segment to its employment opportunities (Ehrhart and Ziegert, 2005). Organisation Lamb may be able to improve recruitment outcomes by amplifying the '*family first*' message in recruitment materials for the regional labour market. This option will exploit up to 68% of the regional labour market (38% in Segment 1 and 30% in Segment 3, Table 2). One particular attribute that should be emphasised is Spouse/partner employment opportunities at this meat works location (both Segments 1 and 3 give that attribute the highest possible rating of 100 points, Table 2). Our data suggest that Organisation Lamb is not currently attracting workers who value spousal work opportunities. MPP workers rated Spouse/partner employment opportunities at the meat works location relatively low compared with other attributes (the all MPP worker sample gives this attribute 20 points and the family focused workers in Segment 2 give this attribute 27 points, Table 4). Organisation Lamb's recruitment strategy is more likely to attract the attention of potential employees by developing its '*family first*' brand and including the appropriate attributes in its recruitment ads.

Organisation Lamb is experiencing particularly intense pressure to increase productivity in a very competitive marketplace with a limited supply of animal resources. In this environment, there is a new urgency for Organisation Lamb to generate HRM efficiencies by attracting workers with a good fit to the organisation. Our analysis highlights the opportunity for Organisation Lamb to more efficiently utilise its local labour market by engaging in targeted recruitment strategies. Immigrant workers may value seasonal work to suit temporary visa conditions. But seasonal jobs may be less attractive to regional workers who need steady employment. Hence MPPs may need new marketing strategies to attract local workers.

The other option suggested by our research is for MPPs to diversify their recruitment strategies to target multiple segments (family-, job- *and* organisation-focused workers) simultaneously. Organisation Beef is experiencing some success in drawing from multiple segments; its workers are equally likely to value family attributes (Segment 2 in Table 4) as organisation/job attributes (Segment 1 in Table 4). However, a diversified recruitment strategy is not just about being all things to all potential applicants. A recruiting message may be muddied if an ad contains multiple messages (e.g., presenting a simultaneous emphasis on family, job and organisation attributes). Instead, organisations can develop multiple 'value propositions' explaining why an applicant should work for them rather than a competitor (Guthridge and Lawson, 2008). These value propositions can then be communicated through differentiated advertising strategies, where each strategy communicates different content and uses different communication channels to target a distinct segment of the labour market.

Diversification is particularly recommended for organisations beyond urban boundaries. Organisations that have relied on attracting income focused workers (Gilbert et al., 2003) are not using a sustainable recruiting strategy. In the MPP sample this attribute ('How much income I can earn from the job') is rated most important (100). However, in the labour market sample, this attribute is rated much lower (39). Targeted regional recruitment strategies and related market communication (for example, recruitment ads, Bennett, 2007) should therefore be developed to appeal to distinct segments (for example, job and/or family segments). Meat processing organisations should develop multiple recruitment advertising programs targeting different worker segments to reach a broader audience. In designing their recruitment materials, meat processing organisations need to emphasise those attributes which members of the target segment consider to be important. By communicating a match between the organisation's attributes and applicants' preferences, segment-targeted recruiting is likely to present specific MPP positions as especially relevant and appealing to some applicants (Birrell, 2004), and to demonstrate to those applicants their 'fit' with the MPP (Kohl et al., 1997). Extrapolating from literature which emphasises beneficial outcomes from targeted advertising (e.g. Breaugh 2008; Ryan &Tippins, 2004), we would expect the improved recruitment outcomes to compensate

for any additional advertising expenditure experienced by organisations engaging in these recruitment strategies.

Several limitations of the research should be noted. First, this research relied on preference data collected directly from current and potential workers, i.e. it is a single source study. Future research is needed to examine whether meat processing workers' attribute preferences reliably predict their actual job choice decisions and how these decisions might vary over time. Second, this is a region specific study. Further research could consider alternative regional labour sources. The regional town of Horsham (population of 14,000) might be a viable labour source for Organisation Lamb. Although Horsham's population is smaller than that of Subsample 1, it is physically closer to Organisation Lamb (only 157 km). Organisations should test their own local markets and compare prospective applicants' preferences with those of their current workers for better recruitment outcomes. Finally, our research focused on an Australian sample of meat processing workers. Regional labour shortages are an international problem across diverse industries such as meat processing and health care. But because different geographic locations may have unique market segments, market segmentation studies should be conducted in other countries and cultures.

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