

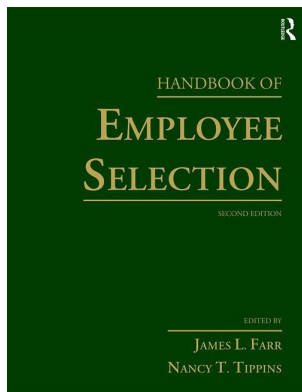
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## **Selection for Service and Sales Jobs**

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## SELECTION FOR SERVICE AND SALES JOBS

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JOHN P. HAUSKNECHT AND ANGELA L. HEAVEY

According to data from the Bureau of Labor Statistics (BLS), U.S. organizations currently employ more than 30 million workers in service and sales occupations (U.S. Department of Labor, 2015). Although annual turnover rates can exceed 100% for some jobs in services and sales, even a conservative estimate of 20% turnover reveals that U.S. organizations select more than 6 million service and sales workers each year. As such, many organizations have adopted formal assessment methods to improve hiring decisions and ultimately increase organizational effectiveness. Research shows that the use of validated selection tools as part of a broader, strategic approach to human resource (HR) management is associated with higher productivity, lower employee turnover, and better corporate financial performance (Huselid, 1995; Terpstra & Rozell, 1993). However, it is clear that not all selection methods are equally effective, nor do research findings apply uniformly to all occupations.

This chapter provides a review of selection research for service and sales occupations and is organized into three major sections. First, we describe the nature of service and sales work and define the competencies that underlie success in these jobs. Second, we summarize past research concerning the methods that have been used to select service and sales employees with attention to issues of validity, applicant reactions, and adverse impact. Finally, we discuss the implications of this body of work for practice and future research, highlighting several important but often overlooked issues concerning selection system design for this critical workforce segment.

### NATURE OF SERVICE AND SALES WORK

Companies rely upon their core service and sales workers to execute service-driven strategies and place the organization's products and services in the hands of customers and clients (Vinchur, Schippmann, Switzer, & Roth, 1998). Service and sales jobs share many similarities because service- and sales-related tasks can be found in both types of occupations, and there is a large degree of competency overlap (Frei & McDaniel, 1998). As detailed below, many of the similarities are attributable to the high degree of interpersonal interaction with clients or customers required in these jobs (Mount, Barrick, & Stewart, 1998).

### Major Duties and Responsibilities

Broadly defined, service work involves relational processes between service providers and customers. Unlike goods, services are relatively intangible, cannot be stored or transported, require

the participation of the customer, and because of changing situational demands, tend to be less standardized (Bruhn & Georgi, 2006; Schneider & White, 2004). BLS data show that service workers (broadly defined) have come to dominate the U.S. economy, as more than 80% of jobs involve at least some aspect of service provision as opposed to goods production. Some of the most common job titles for service workers in the United States include *retail sales worker* (approximately 8.6 million employees, based on Occupational Employment Statistics from BLS, May 2014) and *waiter/waitress* (2.4 million). Table 35.1 provides a sampling of these and other job titles commonly found within the service sector.

Occupational information from the O\*NET™ database (<http://www.onetcenter.org>) reveals that the core activities of service workers often involve (a) interacting directly with the public (i.e., customers), (b) processing customer requests (e.g., billing inquiries, food orders, bank deposits), (c) soliciting sales of new products and services, and (d) routinely dealing with unpleasant and angry people, such as when resolving complaints.

In contrast, the general nature of most sales work involves selling products and services to customers, clients, or businesses. (See Table 35.1 for a sample of common sales-related job titles.) This group consists largely of retail sales workers, cashiers, and sales representatives. On the basis of O\*NET information, the core activities of sales workers include (a) locating new clients or customers, (b) determining customers' needs, (c) providing information about products or services (e.g., features, benefits, pricing), (d) convincing customers to purchase products or services, (e) negotiating sale prices and terms, and (f) providing follow-up services.

## Competencies Required for Success

O\*NET data reveal several competencies (i.e., knowledge, skills, abilities, and other characteristics [KSAOs]) that underlie successful performance in common service and sales occupations. These competencies and their O\*NET definitions are summarized in Table 35.2.

For the knowledge dimension, understanding basic customer and personal service principles and processes is necessary for both types of jobs, but importance ratings for this dimension are generally higher for service occupations than for sales occupations. In contrast, knowledge of sales and marketing concepts is essential for many sales jobs but is rated as much less important for service positions. In terms of required skills, speaking, active listening, service orientation, and social perceptiveness are critical for service and sales occupations. Time management and persuasion tend to be rated high in importance only for sales jobs. Analysis of the ability requirements reveals that both types of occupations require high levels of oral expression and oral comprehension ability. Examination of O\*NET importance ratings for the final dimension—work

TABLE 35.1

*Job Titles for Common Occupations in Services and Sales*

| Services                             | Sales                    |
|--------------------------------------|--------------------------|
| Flight attendants                    | Retail sales workers     |
| Customer service representatives     | Real estate sales agents |
| Ticket agents and travel clerks      | Sales representatives    |
| Tellers                              | Telemarketers            |
| Hotel, motel, and resort desk clerks | Insurance sales agents   |
| Waiters and waitresses               | Travel agents            |
| Gaming service workers               | Advertising sales agents |
| Concierges                           | Cashiers                 |

Source: Information obtained from the O\*NET database. (<http://www.onetcenter.org>.)

TABLE 35.2

*Important Worker Requirements and Characteristics for Service and Sales Occupations*

| <i>Worker Requirements</i>   | <i>Worker Characteristics</i>   |
|--|---|
| <i>Knowledge</i>   | <i>Abilities</i>  |
| <p><i>Customer and personal service</i><sup>a</sup>: Knowledge of customer-service principles and processes (e.g., customer needs assessment, quality service standards, evaluating customer satisfaction)</p> <p><i>Sales and marketing</i><sup>b</sup>: Knowledge of principles and methods for promoting and selling products and services (e.g., marketing strategies, product demonstrations, sales techniques)</p>   | <p><i>Oral comprehension</i>: The ability to listen to and understand information and ideas presented through spoken words and sentences</p> <p><i>Oral expression</i>: The ability to communicate information and ideas in speaking so that others will understand</p>   |
| <i>Skills</i>  | <i>Work styles</i>  |
| <p><i>Speaking</i>: Talking to others to convey information effectively</p> <p><i>Active listening</i>: Giving full attention to what others are saying, taking time to understand points made, and asking questions as appropriate</p> <p><i>Service orientation</i>: Actively looking for ways to help people</p> <p><i>Social perceptiveness</i>: Maintaining an awareness of others' reactions and understanding why they react as they do</p> <p><i>Time management</i><sup>b</sup>: Managing one's own time and the time of others</p> <p><i>Persuasion</i><sup>b</sup>: Persuading others to change their minds or behavior</p> | <p><i>Conscientiousness</i>: Being dependable, reliable, attentive to detail, and trustworthy</p> <p><i>Adjustment</i>: Poise, flexibility, maintaining composure, and dealing calmly with high-stress situations</p> <p><i>Interpersonal orientation</i><sup>a</sup>: Being pleasant, cooperative, sensitive to others, and preferring to associate with other organizational members</p> <p><i>Achievement orientation</i><sup>b</sup>: Setting personal goals, persisting in the face of obstacles, and willing to take on responsibilities and challenges</p> |

According to O\*NET, information worker requirements are defined as "descriptors referring to work-related attributes acquired and/or developed through experience and education." Worker characteristics are defined as "enduring characteristics that may influence both work performance and the capacity to acquire knowledge and skills required for effective work performance."

<sup>a</sup> Rated as more important for service-related occupations.

<sup>b</sup> Rated as more important for sales-related occupations.

Source: Information obtained from the O\*NET database. (<http://www.onetcenter.org>.)

styles—reveals that conscientiousness and adjustment are rated highly for both types of occupations. Interpersonal orientation is rated higher for service occupations, whereas achievement orientation is rated higher for sales jobs.

### Contrasting Service and Sales Jobs

Although there are many similarities between service and sales occupations, closer examination of O\*NET data reveals several notable differences in the degree to which certain characteristics are deemed critical to successful job performance. When compared to service occupations, sales employees must possess higher levels of initiative, persistence, persuasiveness, negotiation, and time management. In contrast, service work requires higher levels of interpersonal orientation and greater knowledge of customer service principles, and the importance of sales and marketing knowledge is somewhat diminished. More broadly, sales workers are rewarded differently (e.g., commission-based pay) and tend to operate independent of supervision (Vinchur et al., 1998). Despite these differences, the selection systems ultimately adopted for service and sales workers are often very similar. In the research review presented in the following section, we do not make strong distinctions between the two unless warranted. Instead, we organize the review around the competencies that have been routinely assessed in past research.

## RESEARCH ON SELECTION FOR SERVICE AND SALES WORKERS

It is clear from our review of selection research published over the last 50 years or so that there are no simple solutions when it comes to designing selection systems for service and sales workers that are valid, fair, legally defensible, and relatively simple to administer. The review emphasizes validity evidence to reflect the focus of past research and concludes with information regarding applicant perceptions and adverse impact considerations.

### Selection Research on Personality and Personality-Related Characteristics

By far, most of the published literature on selection for service and sales workers involves personality assessment. This is perhaps not surprising given the interpersonal and motivational skills required for success in these occupations (see Table 35.2). Although there are exceptions, most of the published work in this area concerns assessment of the “Big Five” dimensions of personality using self-report, paper-and-pencil inventories. A smaller number of studies examine personality dimensions that are more narrowly defined or evaluate personality-related constructs that are developed specifically for service or sales occupations. Although we generally restrict the focus to personality measures used in service and sales domains, a broader discussion of personality and selection can be found in Chapter 13, this volume.

### Big Five Personality Dimensions

The dimensions of the Big Five (or Five-Factor Model) include agreeableness, conscientiousness, emotional stability, extraversion, and openness to experience. Agreeableness is generally defined as being flexible, trusting, cooperative, forgiving, and tolerant (Barrick & Mount, 1991; Vinchur et al., 1998). Conscientiousness refers to one’s level of dependability, achievement-orientation, and perseverance (Barrick & Mount, 1991). Emotional stability, also referred to as neuroticism, encompasses traits such as anxiousness, depression, anger, embarrassment, or insecurity (Barrick & Mount, 1991), whereas extraversion assesses interpersonal interaction, tapping such traits such as assertiveness and sociability (Vinchur et al., 1998). Finally, openness to experience refers to one’s propensity to be imaginative, curious, intelligent, or artistically sensitive (Barrick & Mount, 1991). Many scales have been developed to assess the Big Five, which often contain several hundred items.

Associations between Big Five personality dimensions and performance in sales jobs have been summarized using meta-analysis. When supervisor-provided ratings were the performance criterion, Vinchur et al. (1998) found average unadjusted correlations of .03 (agreeableness), .11 (conscientiousness), .05 (emotional stability), .09 (extraversion), and .06 (openness to experience). Effects were somewhat larger after corrections for criterion unreliability and range restriction were applied ( $r = .03$  to  $.12$ ). When examining objective sales performance as the criterion, they found average unadjusted correlations of  $-.02$  (agreeableness), .17 (conscientiousness),  $-.07$  (emotional stability), .12 (extraversion), and .03 (openness to experience). Values were generally larger once corrected for range restriction, particularly in the case of conscientiousness (.31) and extraversion (.22). Vinchur et al. also reported relatively larger effects for those studies that used an alternative taxonomy of personality dimensions. In particular, unadjusted validity coefficients for achievement (defined as a subdimension of conscientiousness) and potency (subdimension of extraversion) as predictors of supervisor ratings were .14 and .15, respectively (corrected values were .25 and .28, respectively). When considering objective sales criteria, unadjusted validity estimates for achievement and potency were .23 and .15, respectively (corrected values were .41 and .26). In service contexts, dozens of studies (e.g., Avis, Kudisch, & Fortunato, 2002; Hunthausen, Truxillo, Bauer, & Hammer, 2003; Hurley, 1998; Liao & Chuang, 2004; Mount et al., 1998) reveal correlations with job performance ratings ranging from .09 to .20 (agreeableness), .11 to .33 (conscientiousness), .09 to .21 (emotional stability), .07 to .26

(extraversion), and .09 to .20 (openness to experience). Hurtz and Donovan (2000) also provide personality validity coefficients for sales and customer service samples, values of which are comparable to those reported above. Across studies, differences in types of jobs studied, the rating criteria adopted, and other study characteristics likely explain variability in effect-size estimates, but many of these moderators have not been empirically evaluated to date.

One recent exception is Judge and Zapata's (2015) investigation of situational strength, or the degree to which work situations have clear structure, rules, and cues that govern expected behavior. They argued that weak situations (i.e., those with limited external control and greater individual discretion) would allow personalities or traits to play a more prominent role in determining performance. Results were supportive, as all Big Five dimensions revealed higher predictive validity in weak situations (though some results vary depending on how situational strength was operationalized; see Judge & Zapata, 2015, p. 1162).

In other studies, interactive effects among personality dimensions, moderating contextual influences, and other design considerations have been found to account for an additional 2–9% of the variance in performance ratings. Brown, Mowen, Donovan, and Licata (2002) studied front-line restaurant service workers and found that customer orientation partially mediated the relationship between certain personality traits (emotional stability, agreeableness, need for activity) and self- and supervisor-provided performance ratings. The results indicated that customer orientation accounted for an additional 2% of the variance in supervisor-reported performance and an additional 9% of the variance in self-reported performance. In a selection context, such results show the potential value of assessing certain traits (i.e., customer service orientation) in conjunction with more traditional personality characteristics.

Research has also found that certain cognitive-motivational work orientations, specifically accomplishment-striving and status-striving, may mediate the relationship between certain personality traits (i.e., conscientiousness and extraversion) and supervisor-rated job performance (Barrick, Stewart, & Piotrowski, 2002). Barrick et al. sampled telemarketing sales representatives and found that an individual's orientation toward status-striving mediated the relationship between extraversion and job performance such that individuals scoring higher on extraversion were more likely to strive for status, which in turn resulted in higher supervisor ratings of effectiveness. Similarly, individuals high in conscientiousness were more likely to strive for accomplishment, which led to higher effectiveness ratings indirectly through status-striving.

Goal-setting behavior is another motivational variable that has been found to mediate the relationship between personality and job performance. Looking specifically at the personality trait of conscientiousness, Barrick, Mount, and Strauss (1993) studied sales representatives of a large appliance manufacturer and found that the relationship between conscientiousness and supervisor-rated job performance was mediated by goal commitment and autonomous goal-setting, such that individuals scoring high in conscientiousness were more likely to set and commit to goals, which then led to increased job performance. The above studies help illustrate the *process* by which personality affects job performance.

In terms of design, researchers have found that using supervisor, coworker, and customer ratings of employee personality (rather than self-ratings alone) increases the total explained variance in performance ratings by an additional 11–20% (Mount, Barrick, & Strauss, 1994). In addition, when job performance is measured using more specific versus general job criteria, personality characteristics appear to more accurately predict job performance ratings (Hogan & Holland, 2003). Regarding personality measurement, Hunthausen et al. (2003) studied entry-level customer service managers at a major airline and found that using an “at-work” frame of reference (i.e., asking respondents to think about how they behave at work when responding to survey questions) resulted in stronger relationships between two dimensions of the Big Five (extraversion and openness to experience) and supervisory performance ratings (controlling for cognitive ability). Huang and Ryan (2011) found meaningful variation in personality states within individuals over time, suggesting that workers' abilities to adapt their personality to the situational demands may be more important than having a certain “average” or stable level of any given characteristic. Finally, Grant (2013) found evidence of a curvilinear relationship between extraversion and sales revenue among call-center representatives, observing that performance gains associated with extraversion begin to decline at higher levels of this personality dimension.



Such findings suggest that the optimum level of certain personality characteristics may vary depending on the focal occupation and corresponding job demands.

### ***Narrow Personality Traits***

Although a large amount of research centers on broad measures of personality such as the Big Five, researchers have also examined relationships between specific or narrow traits of personality and job performance. In general, there is debate concerning whether broad or narrow measures of personality are best for predicting job performance. Although some contend that broad measures are more successful at predicting overall performance (Ones & Viswesvaran, 1996), others maintain that narrow measures account for more variance and argue that researchers should use narrow personality traits to predict specific aspects of job performance (Schneider, Hough, & Dunnette, 1996). In doing so, criterion-related validity may be improved because the predictors (traits) are more closely attuned to the criterion (job performance).

Although not as plentiful as the research involving broad traits, there is evidence supporting a narrow-traits approach to studying job performance. A meta-analysis conducted by Dudley, Orvis, Lebiecki, and Cortina (2006) found (in their overall analysis, which included all types of jobs) that four narrow traits of conscientiousness (dependability, cautiousness, achievement, and order) have incremental validity over the global conscientiousness construct in predicting performance. Specifically, the narrow traits explained an additional 3.7% of variance in overall performance. Breaking performance into more specific criteria, narrow traits explained an additional 5–26% of the variance in specific aspects of job performance, such as task performance (4.6%), job dedication (25.9%), interpersonal facilitation (5.8%), and counterproductive work behaviors (13.6%).

In addition, Dudley et al. (2006) examined the incremental validity of narrow traits of conscientiousness on the basis of occupational type. Jobs were divided into four occupation types: sales, customer service, managerial, and skilled/semi-skilled. Across all occupational categories, narrow conscientiousness traits were found to have incremental validity of 1–24% over the global dimension. Although the incremental validity of narrow traits over the global trait was relatively small for the customer service occupational group (1.2%), it rose to 5.4% for the sales group. The managerial occupational group showed a 9.3% increase in variance explained, whereas the skilled/semi-skilled group posted the largest increase at 24%. On the basis of these results, the authors note that the degree of prediction offered by narrow traits depends in large part on the type of job and the aspect of performance under study (Dudley et al., 2006). In the context of sales and service selection, such results suggest that although the assessment of narrow conscientiousness traits may be useful for selection of salespeople, such assessment may have less utility for those positions with a customer service focus. Although further research is necessary to examine the utility of a narrow traits approach to personality assessment (particularly for other personality dimensions), initial results suggest the assessment of narrow traits may be useful in predicting performance for certain jobs.

### ***Service/Customer/Sales Orientation***

Given the distinctive features of service and sales work, researchers have developed composite scales to assess candidates' dispositions toward customers, service, and/or sales. Sometimes referred to as "criterion-focused occupational personality scales" (Ones & Viswesvaran, 2001), these self-report, noncognitive composite measures typically assess a pattern of personality characteristics that are thought to underlie successful performance in service and sales domains. Service orientation is one such construct, and it is defined as a set of basic predispositions to provide helpful customer service, including dimensions such as friendliness, reliability, responsiveness, courteousness, and cooperativeness (Cran, 1994; Frei & McDaniel, 1998; Hennig-Thurau, 2004; Hogan, Hogan, & Busch, 1984).

Meta-analysis findings provide evidence of validity for service orientation measures. In a review of 41 studies, and with supervisory performance ratings serving as the criterion, Frei and

McDaniel (1998) reported an unadjusted validity coefficient of .24. They also showed that service orientation was moderately correlated (approximately .30 to .40) with several Big Five personality constructs (agreeableness, emotional stability, and conscientiousness), sales drive, and social vocational interests. Service orientation was generally unrelated to extraversion, openness to experience, cognitive ability, or other vocational interests. One caveat noted by Frei and McDaniel is that most of the coefficients summarized in the meta-analysis were drawn from unpublished studies that were produced by the test vendor. More recently, McDaniel, Rothstein, and Whetzel (2006) conducted a case study of test vendor technical reports and found evidence of “moderate-to-severe publication bias” such that two of the four test vendors studied showed a greater likelihood of reporting only statistically significant validity coefficients for particular scales. A second concern is that researchers have found that service orientation measures fare no better than general personality dimensions in predicting performance and do not predict service-focused criteria any better than they predict broader criteria such as overall performance or counterproductive work behaviors (Ones & Viswesvaran, 2001; Rosse, Miller, & Barnes, 1991).

Several measures have been developed to evaluate sales potential, customer-oriented selling orientation, or sales ability. These scales variously reflect composite measures of personality facets that are important for success in sales occupations (e.g., Hakstian, Scratchley, MacLeod, Tweed, & Siddarth, 1997; Hogan, Hogan, & Gregory, 1992; Li & Wang, 2007), self-assessments of behaviors taken when selling (Saxe & Weitz, 1982), or knowledge of basic selling principles (Bruce, 1953, 1971, as cited in Vinchur et al., 1998). These studies generally find that sales potential is predictive of supervisory ratings and objective sales (Farrell & Hakstian, 2001; Hogan et al., 1992; Li & Wang, 2007). Regarding selling/customer orientation, meta-analytic evidence from 19 studies reveals unadjusted validity coefficients of .17 for subjective performance measures and .06 for objective performance indicators, although confidence intervals for the two criteria overlap (Jaramillo, Ladik, Marshall, & Mulki, 2007). Vinchur et al. (1998) summarized the predictive validity of sales ability measures using meta-analysis and reported unadjusted average correlations of .26 (supervisory performance ratings) and .21 (objective sales). Finally, a recent study by Gupta, Ganster, and Kepes (2013) showed that a specific measure of *sales self-efficacy*—i.e., “a person’s belief that he or she has the ability to sell products and services and that he or she enjoys the tasks involved in selling products or services” (p. 691)—was more predictive of both objective and subjective performance than were the broader Big Five measures (when using a concurrent validation strategy). The authors thus caution against the exclusive reliance on generalized personality measures when selecting sales workers.

### Selection Research on Background, Experience, Interests, and Other Life History Dimensions

In addition to personality testing, the other dominant approach to the selection of service and sales workers involves systematic assessment of candidates’ personal histories using biodata inventories. The most common approach has been to develop paper-and-pencil questionnaires that ask candidates about various domains such as work history, experience, interests, values, attitudes, and leadership activities (e.g., Allworth & Hesketh, 2000; Jacobs, Conte, Day, Silva, & Harris, 1996; McManus & Kelly, 1999; Ployhart, Weekley, Holtz, & Kemp, 2003; Schoenfeldt, 1999; Stokes, Toth, Searcy, Stroupe, & Carter, 1999). Regarding sales occupations, meta-analysis evidence reveals an average unadjusted correlation of .31 between biodata and job performance ratings and .17 between biodata and objective sales (Vinchur et al., 1998). Dalessio and Silverhart (1994) found that biodata predicted 12-month survival and first-year commissions among life insurance sales agents, although effects tended to be smaller than those typically found for performance rating criteria. Research also supports biodata as a predictor in customer service contexts. Allworth and Hesketh (2000) found that a biodata inventory that measured experience with tasks and behaviors required in service jobs provided incremental validity beyond cognitive ability and personality measures in explaining supervisory performance ratings.

Although biodata inventories encompass multiple aspects of an applicant’s background, work experience is one element of such inventories that deserves more detailed examination. Organizations



routinely advertise that “previous experience is required” for many service and sales jobs, but experience is rarely addressed in most validation studies. Drawing from two broader meta-analyses that included (but were not limited to) sales and service jobs reveals some support for work experience as a predictor of performance. Schmidt and Hunter (1998) reported an adjusted correlation of .18 between previous work experience (in years) and job performance. When work experience measures were categorized according to their level of specificity (task, job, and organization) and measurement mode (amount, time, and type), researchers found adjusted correlations with performance ranging from .16 to .43 (Quinones, Ford, & Teachout, 1995) and suggested that validity can be maximized by measuring the amount of work experience and tailoring measures to the task level.

Although neither study was conducted with an exclusive focus on sales or service settings, other research demonstrates the potential of assessing an applicant’s previous work experience in these contexts. Allworth and Hesketh (2000) approached the construct of work experience by collecting job requirements biodata from incumbents at an international hotel. This type of biodata asked participants to gauge how much their previous or current jobs required them to enlist certain customer service behaviors. Overall, the authors found that job requirements biodata accounted for 7.6% of unique variance in job performance. Further validation studies by Weekley and Jones (1997, 1999) in multiple service contexts found correlations between previous work experience and future performance that ranged from .14 to .19. Work experience was assessed using a multidimensional measure that asked participants to report their total full-time work experience, maximum tenure with any single organization, retail-specific work experience, number of different employers, and tenure in last job.

### Selection Research on Cognitive Ability

Cognitive ability testing is somewhat of an enigma in the context of service and sales occupations. Although cognitive ability is a strong predictor of performance for a wide range of jobs (Hunter & Hunter, 1984; see also Chapter 12, this volume), research that is specific to service and sales occupations yields mixed results. Some studies report finding no relationship between cognitive ability and performance (Jacobs et al., 1996; Robie, Brown, & Shepherd, 2005), whereas others have found statistically significant effects, with validity coefficients generally ranging from .10 to .25 (Allworth & Hesketh, 2000; Avis et al., 2002; Cellar, DeGrendel, Klawnsky, & Miller, 1996; Hakstian et al., 1997; McCarthy et al., 2013; Miner, 1962; Rosse et al., 1991; Stokes, Hogan, & Snell, 1993; Weekley & Jones, 1997, 1999). A meta-analysis of the cognitive ability–performance relationship for sales jobs in particular may help explain these discrepant findings. Vinchur et al. (1998) found an unadjusted validity coefficient of .23 for general cognitive ability when the criterion was supervisory ratings of job performance (based on 22 studies) but only .02 when the criterion was objective sales volume (12 studies). Unadjusted validity coefficients involving verbal ability and quantitative ability (two facets of general cognitive ability) were generally low (–.17 to .08) and were largely based on a small number of studies. Thus, variance in performance criteria, predictor dimensions, and sample characteristics may account for the differences in effect sizes observed across studies. One final consideration is that O\*NET data for common sales and service occupations reveal importance ratings for problem-solving and critical thinking skills that are comparably lower than those for social skills, which may also explain why cognitive ability is not a stronger predictor of performance in service and sales contexts. On the other hand, certain service and sales jobs may indeed require fairly high levels of critical thinking and problem-solving skills, such as those that require consultative selling and ongoing relationship management (e.g., pharmaceutical sales; see Ahearne, Bhattacharya, & Gruen, 2005).

### Selection Research on Situational Judgment

Situational judgment tests (SJTs) present candidates with various job-related scenarios and ask how they would respond to each situation (McDaniel, Hartman, Whetzel, & Grubb, 2007;

Weekley & Jones, 1997). For example, candidates for service-related positions may be asked how they would respond when a customer requests an item that the store does not carry (Weekley & Jones, 1999). On the basis of scoring guidelines established during test development, responses are weighted based on how well they match the judgment exercised by high-performing incumbents. Research shows unadjusted validity coefficients averaging in the mid-.20s when SJTs are used to predict job performance (McDaniel et al., 2007). Although this meta-analysis was not restricted to service and sales research, the findings are consistent with individual studies conducted in service contexts (McCarthy et al., 2013), including those that have used a video-based mode of administration rather than paper and pencil (Cellar et al., 1996; Weekley & Jones, 1997, 1999). These latter studies also show that SJTs offer incremental validity over cognitive ability as a predictor of performance.

### Applicant Reactions

In addition to validity concerns, it is important to consider how applicants will respond to different selection procedures. Broadly speaking, research on applicant reactions involves understanding candidates' perceptions of the fairness and job-relatedness of different selection procedures. The general arguments put forth in this area suggest that candidates who hold negative perceptions of the selection process will be less attracted to the company, less likely to recommend the company to others, and perhaps even less likely to perform well or remain on the job (Gilliland, 1993). Literature reviews and meta-analytic evidence confirm many of these propositions (Hausknecht, Day, & Thomas, 2004; Ryan & Ployhart, 2000), with the exception of the hypothesized performance and retention outcomes, which are only beginning to be systematically addressed. For instance, across studies involving sales and service samples, McCarthy et al. (2013) found some evidence that reactions affected job performance indirectly via test scores, but did not find any support for the notion that candidate reactions affect the criterion-related validity of test scores.

When compared with a list of other possible selection methods, participants have among the least favorable reactions to personality inventories and biodata, whereas reactions to cognitive ability testing tend to be somewhat more positive but not as favorable as they are to interviews or work samples (Hausknecht et al., 2004). We are not aware of any published work on applicants' reactions to occupation-specific inventories. Given their strong association with personality inventories, one might expect reactions to be somewhat negative. However, because these tests have been designed for particular applications in service and sales contexts, fairness and job-relatedness perceptions may improve because of the close connections to relevant aspects of the job. Smither and colleagues found that applicants' perceptions were more positive for item types that were less abstract, suggesting that occupation-specific predictors may fare somewhat better on this dimension (Smither, Reilly, Millsap, Pearlman, & Stoffey, 1993). Applicant reactions to SJTs have been studied infrequently, but evidence from Chan and Schmitt (1997) indicated that reactions to a video-based SJT were favorable and comparable in magnitude to those found for work sample tests in the Hausknecht et al. (2004) meta-analysis. Bauer and Truxillo (2006) noted that reactions to SJTs may be dependent on the stimulus and response formats used (i.e., written vs. video, multiple-choice vs. open-ended) but suggested that reactions to SJTs overall should be more favorable than reactions to selection procedures with more abstract content.

### Adverse Impact

Given the legal context of selection and employment testing, concerns about adverse impact must be given due consideration in selection system design and administration. Although a detailed treatment of adverse impact research is beyond the scope of this chapter (see Hough, Oswald, & Ployhart, 2001), several findings are summarized here concerning subgroup differences in test scores for the predictor classes reviewed above. We note upfront that even small subgroup differences can produce adverse impact (as defined by the four-fifths rule), particularly

as organizations become more selective (Sackett & Ellingson, 1997). Furthermore, adverse impact calculations involving a small number of hires and/or low selection ratios tend to produce higher numbers of false positives, meaning that adverse impact can be found even though subgroup differences are not statistically significant (Roth, Bobko, & Switzer, 2006). Finally, it is important to point out that many of the estimates reported in this section are based on reviews that include, but are not limited to, samples drawn from service and sales domains. At this point in the literature, there are simply too few published studies available to make definitive conclusions concerning adverse impact in sales and service settings.

Generally speaking, subgroup differences based on ethnic/cultural background, gender, and age for Big Five personality measures tend to be minimal and, when found, are typically less than one-tenth of a standard deviation. The largest effects have been found for measures of agreeableness (women tend to score about four-tenths of a standard deviation higher than men) and emotional stability (men tend to score about one-quarter of a standard deviation higher than women; Hough et al., 2001). Subgroup differences have not been comprehensively assessed for measures of service/sales/customer orientation, although the large overlap with personality constructs suggests that differences would be relatively small. Hogan et al. (1992) examined archival data for a personality-based sales potential inventory and found no differences when comparing scores across ethnic/cultural and gender-based subgroups. Published data concerning subgroup differences for biodata inventories in sales and service contexts are limited, although broader reviews find that the average performance for Whites is about one-third of a standard deviation higher than that for Blacks (Bobko, Roth, & Potosky, 1999).

For measures of cognitive ability, the cumulative evidence (across all types of occupations) indicates that Whites score approximately one standard deviation higher than Blacks, over one-half of a standard deviation higher than Hispanics, and approximately two-tenths of a standard deviation lower than Asians (Hough et al., 2001; Roth, Bevier, Bobko, Switzer, & Tyler, 2001). These estimates are moderated by job complexity such that subgroup differences tend to be larger for less complex jobs. Thus, given that many service and sales occupations are relatively low in complexity (see O\*NET), subgroup differences may be somewhat larger in these domains. Regarding age and gender differences, research shows that age and cognitive ability test scores tend to be negatively related, whereas cognitive ability test performance does not generally differ between males and females (Hough et al., 2001). Finally, research on subgroup differences for video-based and written SJTs shows that Whites tend to score about four-tenths of a standard deviation higher than members of other ethnic/cultural groups, whereas women tend to score slightly higher (approximately one-tenth of a standard deviation) than men (Nguyen, McDaniel, & Whetzel, 2005, cited in Ployhart & Holtz, 2008). Potential age-based differences for SJTs have not been reported in the published literature.

In summary, validity and adverse impact considerations often represent tradeoffs. Selection methods with strong evidence of predictive validity often share variance with cognitive ability, and cognitively loaded measures tend to produce the highest levels of adverse impact. Pyburn, Ployhart, and Kravitz (2008) termed this situation the “diversity-validity dilemma.” From a practical standpoint, there are many strategies available to selection specialists who must balance diversity and validity concerns, and the interested reader is directed to several recent papers that provide valuable critiques of these various approaches (Aguinis & Smith, 2007; De Corte, Lievens, & Sackett, 2007; Kravitz, 2008; Ployhart & Holtz, 2008). One common conclusion from this line of research is that, to date, there are no universal solutions that successfully maximize validity and eliminate adverse impact.

## IMPLICATIONS FOR PRACTICE AND FUTURE RESEARCH

Despite the wealth of information available concerning service and sales selection, several opportunities remain to enhance our understanding of the factors that contribute to effective selection in these domains. We raise several issues with regard to past research in terms of (a) the criteria adopted, (b) the range of predictors studied, (c) the temporal perspectives addressed, and (d) the levels of analysis considered.

## Criterion Issues

Much of the research reviewed here has included supervisory performance ratings as the sole criterion. Although these ratings serve many important functions, rarely are organizations as interested in boosting performance appraisal ratings as they are in increasing sales volume and service quality perceptions. Objective sales figures have obvious implications for an organization's bottom line, and customer perceptions of service quality are an important leading indicator of future sales and repeat business (Bowman & Narayandas, 2004). Furthermore, particularly in sales domains, research has shown that validity coefficients vary considerably across different criteria (Vinchur et al., 1998). Thus, organizations that use cognitive ability tests, for example, may see no benefit in terms of enhanced sales volume among new hires (but would identify candidates who will be rated highly by supervisors). Despite the appeal of using objective sales criteria, such validation work requires adequate consideration of situational opportunities that may influence performance (Stewart & Nandkeolyar, 2006). For example, researchers argue for controlling geographic or territorial constraints such as market potential, workload, company presence in a particular area, local economic conditions, and other region-specific factors (Cravens & Woodruff, 1973; McManus & Brown, 1995).

In addition to considering alternative measures of job performance, researchers might broaden the types of criteria examined in future research. Only a handful of studies reviewed here examined withdrawal behaviors or counterproductive work behaviors (e.g., Dalessio & Silverhart, 1994; Jacobs et al., 1996; Ones & Viswesvaran, 2001). Given the significant costs associated with these outcomes, it would be useful to broaden the scope of selection research by incorporating these criteria into validity studies whenever possible.

## Predictor Issues

Almost exclusively, published research in this area tends to feature self-report, paper-and-pencil personality tests or biodata inventories. This work is valuable, but research must also respond to new and different forms of assessment. For example, Winkler (2006) estimated that about 5% of organizations (e.g., Toyota, SunTrust Bank) are using technology to assess important competencies via online job simulations. These interactive assessments place candidates in a virtual environment that mirrors the work that they would be doing on the job and allows companies to assess important competencies while providing a realistic preview of the work. Other forms of capturing live behavior (e.g., assessment centers) may also be appropriate for assessing service and sales candidates, although little work has been published in this area (see Burroughs & White, 1996, for an exception).

The format of predictors is another important consideration, particularly as organizations consider how to leverage technology when building selection systems. Technology-based selection measures differ from their paper-and-pencil counterparts in several ways (Weekley & Jones, 1997, 1999; see also Chapter 39, this volume) and suggest a different profile of considerations for organizations in terms of costs, applicant reactions, administrative ease, and so forth. Until additional research examines these alternative approaches in the context of what we already know, it is unclear what (if any) effect these alternative forms of assessment have on selection outcomes in service and sales contexts.

## Temporal Issues

Another issue raised by this analysis is that we currently know very little about the role of time in the selection process. Much of the research reviewed here uses concurrent (i.e., cross-sectional) designs or time-lagged predictive designs with a fairly short temporal window (e.g., six-month performance review). Yet, recent explorations into predictors of performance trends suggest that past findings may not readily generalize across time (Ployhart & Hakel, 1998; Stewart & Nandkeolyar, 2006; Thoresen, Bradley, Bliese, & Thoresen, 2004). For example, in a study of

insurance sales personnel, Hofmann, Jacobs, and Baratta (1993) found that the performance of sales agents followed a quadratic trend over time such that mean performance was initially positive and linear, then curved asymptotically with time. The authors suggested that different skills and abilities may be predictive of performance at early and later stages of the sales agents' careers. Goal orientation was advanced as a potential determinant of intraindividual performance trends, such that highly goal-oriented individuals may be better equipped to learn from unsuccessful sales calls over time and more likely to engage in the self-development activities that ultimately lead to improved performance.

Other researchers have shown that conclusions about personality-performance relationships differ when comparing cross-sectional and longitudinal designs such that certain characteristics are more predictive of performance trends than they are of initial performance (Thoresen et al., 2004), whereas others moderate the effect of situational opportunities on performance over time (Stewart & Nandkeolyar, 2006). Conclusions about the predictive validity of cognitive ability measures are also likely time-dependent in service and sales contexts. Keil and Cortina (2001) found that validity coefficients decline with time, and although their review was not confined to sales and service contexts, Cascio and Aguinis (2005) argued that task performance should be dynamic in service contexts (thus making it more difficult to predict over time) because service workers often have to adapt to new work processes as new products or services are introduced. These studies demonstrate that by focusing more closely on temporal dynamics, organizations can not only select candidates who are likely to perform well soon after hire but also identify those who have the capacity to increase their performance over time or reach proficiency in a shorter period, both of which are critically important to long-term organizational success.

## Levels Issues

A final consideration is that nearly all of the studies reviewed here focus on selection at the individual level of analysis. This reflects a long tradition in psychology of examining individual difference characteristics that predict individual job performance. However, selection researchers have argued that the field needs to examine relationships at higher levels of analysis (Ployhart, 2004, 2006). In one recent empirical example, Ployhart, Weekley, and Baughman (2006) found unique personality-performance associations at individual, job, and organizational levels and concluded that higher-level relationships may occur because certain personality factors relate to the teamwork and coordination behaviors critical for success in service work.

Another multilevel study found that a manager's personality may play a role in shaping service climate (Salvaggio et al., 2007). Core self-evaluations were administered to managers, in which participants rated themselves on certain personality traits (i.e., self-esteem, self-efficacy, neuroticism, etc.). Results indicated that managers with more positive self-evaluations had higher service quality orientations, which in turn led to more positive service climates. As the authors note, these results demonstrate the impact that individual managers' personality traits may have on the overall workplace service climate. Considering that service climate positively relates to sales volume via customer-focused citizenship behaviors and customer satisfaction (Schneider, Ehrhart, Mayer, Saltz, & Niles-Jolley, 2005), such findings show that careful attention to employee selection may be useful in predicting not only individual performance but also more distal indicators of success. Taken together, these studies demonstrate that multilevel approaches are valuable for addressing the longstanding question of how to improve organizational effectiveness through selection (see also Chapter 5, this volume).

## CONCLUSIONS

Service and sales workers represent a significant portion of the global workforce, and the economic success of many organizations hinges upon their performance. Although much remains to be learned, the research reviewed here shows that careful attention to selection system design



provides organizations with an opportunity to improve the overall quality of hiring decisions for service and sales employees. Results clearly indicate that investments in formal selection methods improve the odds of finding service and sales workers who will perform well on the job. The validity coefficients discussed here are not large, but they can translate into substantial benefits in terms of reduced hiring and training costs, increased sales productivity, and better service quality. Combining the results of these individual-level studies with what is known about similar relationships at higher levels and over time shows that effective selection is a viable means by which organizations can generate competitive advantage.

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