Bringing Home the Bacon:
Does Productivity Explain the Relationship between Breadwinner Status and Pay?

Colleen Flaherty Manchester
University of Minnesota

Lisa M. Leslie
New York University

Patricia Caulfield Dahm
University of Minnesota

December 15, 2014

Abstract

This paper evaluates pay differences between employees who are primary breadwinners relative to those who are part of a dual-breadwinner household among professional and managerial employees. By leveraging a rich data source that combines administrative records with survey response, we evaluate to what extent pay differences are explained by productivity differences between primary- and dual-breadwinner employees. We find that the pay premium for primary breadwinner employees persists even after addressing possible productivity differences between employees, suggesting that subjective factors contribute to the premium. Evidence that the primary breadwinner pay premium is sensitive to the employment status of the spouse for men, but not women, suggests that social role expectations contribute to the pay premium.

JEL: J33, J71

Keywords: managerial/professional workers, salary, family responsibilities, gender

1. Introduction

Historically, the traditional household has been characterized by specialization: one spouse is employed and serves as the primary breadwinner, while the other is not employed and engages in caregiving and housework. Despite the decline in the prevalence of households characterized by specialization (e.g., Sayer 2005), employees who are primary breadwinners tend to fair better in the labor market. The primary-breadwinner pay premium – typically measured as the higher pay of primary earners relative to employees in dual-earner households – is a persistent finding in labor and organization research, particularly among managerial and professional employees (Pfeffer and Ross 1982; Landau and Arthur 1992; Schneer and Reitman 1993; Stroh and Brett 1996; Hotchkiss and Moore 1999; Schneer and Reitman 2002). Among managers and professionals, primary-breadwinner employees earn upwards of 15 percent more than those from dual-earner households (Pfeffer and Ross 1982; Schneer and Reiman 2002) and their pay grows at a higher rate over time (Stroh and Brett 1996; Schneer and Reitman 2002).

What explains this pay premium? Existing research has identified explanations that can be categorized as productivity based, which include human capital and effort (Kanter 1977, Pfeffer and Ross 1982; Becker 1985), mobility constraints (Hotchkiss and Moore 1999) and selection (Jacobsen and Rayack 1996), or subjective factors, including social role expectations and need-based concerns (Pfeffer and Ross 1982; Landau and Arthur 1992; Stroh and Brett 1996). However, empirical research on the relative influence of these factors is insufficient. While some studies do not even test for mechanisms (Hotchkiss and Moore 1999), most existing research on the primary breadwinner premium assesses support for mechanisms indirectly (Pfeffer and Ross 1982; Landau and Arthur 1992; Schneer and Reitman 1993; Stroh and Brett 1996; Schneer and Reitman 2002), which leads to inconsistent conclusions across studies.

This paper directly evaluates to what extent the primary-breadwinner pay premium for professional and managerial employees is driven by productivity differences using a rich and novel data source. We link survey responses to administrative records for employees at the corporate headquarters of a Fortune 500 firm to use multiple measures and methods to assess whether productivity differences explain the pay premium for primary breadwinners relative to employees in households in which both spouses are breadwinners. In particular, we use administrative measures of job performance and survey-based measures of employee attitudes to directly control for measures of productivity; we supplement this approach using an indirect method that involves comparing the primary breadwinner pay premium across employee gender and employment status of the spouse.

Our work on the primary-breadwinner pay premium contributes to the literature on differences in labor market outcomes by household type in multiple ways. First, it provides the most comprehensive evaluation to date on the role of productivity in explaining differences in pay for employees who exemplify the traditional household model. Our measures of productivity are organization-derived measures of job performance that drive pay and promotion decisions within the firm. With the exception of Korenman and Neumark (1991), past research on the labor market outcomes by household type lacks direct measures of productivity due to its exclusive reliance on household and employee surveys (Hill 1979; Pfeffer and Ross 1982; Landau and Arthur 1992; Schneer and Reitman 1993; Jacobsen and Rayack 1996; Stroh and Brett 1996, Hotchkiss and Moore 1999; Schneer and Reitman 2002). Furthermore, by pairing our administrative data with survey responses, we do not forego the advantages achieved by past researchers who have used surveys to incorporate rich information on employee attitudes into their analyses (Landau and Arthur 1992; Stroh and Brett 1996).

Second, we evaluate the primary breadwinner pay premium for both male and female employees. Much of the past research on pay differences by household type has focused exclusively on men (Pfeffer and Ross 1982; Korenman and Neumark 1991; Jacobsen and Rayack 1996; Stroh and Brett 1996; Hotchkiss and Moore 1999). For the studies that include women, the results are mixed: some find that the premium only applies to men (Schneer and Reitman 1993; Schneer and Reitman 2002; Hill 1979), while another study finds no differences in the premium by gender (Landau and Arthur 1992). The increased labor market attachment and human capital investment by women over time (Percheski 2008), however, calls for renewed attention to female primary breadwinners. In fact, recent survey evidence shows that women out earn their husbands in over 5 million U.S. households (Wang, Parker, and Taylor 2013). Our context is well suited to investigate the pay premium by gender due to the fact that our corporate headquarter sample is characterized by a substantial number of female primary breadwinners. In addition, our use of administrative records on pay represents an advantage over past research that relies on self-reports of pay through survey due to possible gender differences in reporting of pay.

Finally, our study distinguishes primary breadwinner status from the employment status of the spouse. Past studies typically identify primary-breadwinners based solely on whether the spouse works for pay, resulting in identifying the primary breadwinner pay premium by comparing the pay of employees who are sole-earners relative to those in dual-earner households. Our approach has two advantages. First, by separately measuring primary breadwinner status from spousal employment status, our measure likely maps more closely to potential sources of productivity advantages for primary breadwinners (e.g., those stemming from spousal support, or unconstrained mobility) than a measure based solely on the employment

status of the spouse. In particular, when primary breadwinner status is identified based on spousal employment status, one cannot distinguish among the comparison group (i.e. those with an employed spouse) households where the spouse is employed, but in a career deemed as secondary from households where the careers of both spouses are equally prioritized.[1] Second, separating primary breadwinner status from the employment status of the spouse gives us an additional dimension for evaluating the possible role of unmeasured productivity differences in explaining the pay premium for primary breadwinner employees.

In the following section we present the conceptual framework and describe our approach for addressing possible productivity differences by primary breadwinner status. Section 3 describes the data used in the analysis along with descriptive statistics for the sample. Section 4 reports and discusses results on pay differences by primary breadwinner status and assesses to what extent it is driven by productivity differences. Section 5 concludes the paper.

2. Conceptual and Empirical Approach

2.1 Conceptual Framework

Conceptually, there are several reasons why the primary-breadwinner premium may reflect productivity advantages for employees who are primary breadwinners relative to employees who are part of households where the careers of both spouses are equally prioritized (i.e. dual-breadwinner households). First, specialization within the household may increase productivity of primary-breadwinners through the non-employed spouse serving as a resource (c.f. Kanter 1977), which allows for greater human capital investment, work effort, and success in social obligations on the part of the employed spouse (c.f. Pfeffer and Ross 1982; Becker 1985). Second, because primary breadwinners are not constrained in terms of mobility by the career of their spouse, they

[1] Landau and Arthur (1992) classify the employees' breadwinner status based on questions regarding how

are able to move to firms that offer a better match for their skills, resulting in higher pay (c.f. Hotchkiss and Moore 1999). Finally, those who become primary breadwinners may have underlying traits that make them more productive workers relative to those in dual-breadwinner households (i.e. selection; c.f. Jacobsen and Rayack 1996). Each of these potential drivers of productivity differences would generate a pay premium for primary breadwinners relative to those in a dual-breadwinner household based on the standard economic condition that pay reflects productivity. Similarly, the aforementioned productivity-enhancing behaviors of primary breadwinners align with the ideal worker norm of commitment and work devotion, which firms value and reward with greater pay (Williams 1999).

At the same time, subjective factors on the part of the evaluator may contribute to the primary-breadwinner pay premium. The influence of subjective factors in pay setting such that group membership relates to pay over and above measures of productivity has been documented in organizational settings (Castilla 2008; Manchester, Leslie, and Kramer 2012). In the case of the primary-breadwinner premium, past research on pay outcomes by family structure has characterized this potential bias as stemming from two possible factors: 1) social role expectations and 2) need-based equity concerns (c.f., Pfeffer and Ross 1982, Landau and Arthur 1992; Stroh and Brett 1996; Hotchkiss and Moore 1999). Social role theory may explain the pay premium for primary breadwinners relative to those in dual-primary households because it implies that conforming to social role expectations (i.e. a male employee who is a primary breadwinner fulfills the expectation for males to be adequate providers) is rewarded, while deviations (i.e. a male employee who is part of a dual-breadwinner household violates expectation of being an adequate provider) are penalized (Eagly 1987). In terms of equity, the ideal of distributive justice includes the tenet of need-based justice (e.g., Levinthal, 1976;

Deutsch, 1975) and supports allocation of pay based on need. As such the primary breadwinner pay premium may stem from perceptions that primary breadwinners have greater need relative to employees in dual-breadwinner households because the former are responsible for providing the predominant share of financial resources to the household, while in the latter, both spouses provide financial resources.

Past research has investigated mechanisms, but failed to reach consistent conclusions as to the role of productivity versus subjective factors when evaluating the primary breadwinner pay premium. In particular, one finding is that male employees in a traditional household model earn the most (Schneer and Reitman 1993; Schneer and Reitman 2002) yet this supports both the spouse-as-a-resource argument (i.e. productivity) as well as conformance to social role expectations (i.e. subjective factors). Our approach is to focus on the role of productivity by using a comprehensive strategy that employs direct and indirect methods to address productivity differences between employees. To the extent that the pay premium persists after addressing these differences, then we could rule out productivity-based explanations in favor of subjective factors.

2.2 Addressing Productivity Differences Empirically

Direct measures of output typically do not exist for professional and managerial employees because their productivity manifests through team-based outcomes or the work of their subordinates. As a direct proxy for productivity, we use multiple years of job performance ratings taken from the organization's administrative records. Our measure of productivity is a multi-dimensional performance rating that is calibrated across the organization and likely captures essential elements of productivity for managerial and professional employees. Such an approach is an important departure from past research on the primary-breadwinner pay premium

among managerial and professional employees, which has mostly addressed productivity differences by controlling for human capital (Landau and Arthur 1992; Schneer and Reitman 1993, 2002; Stroh, Brett, and Reilly 1996) or conducting comparison across employee groups (Hotchkiss and Moore 1999; Pfeffer and Ross 1982; Talbert and Bose 1977) to assess role of productivity in explaining the pay premium.

Despite our rich measure of productivity, it is possible that the primary-breadwinner pay premium is driven by productivity differences not captured by job performance ratings. We address this in two ways. First, we control for employee work attitudes – career aspirations and organizational commitment – that are positively related to career outcomes and, therefore, may capture relevant dimensions of unmeasured productivity. For example, if primary breadwinners have greater career aspirations than dual-breadwinner employees, they may engage in behaviors, such as networking, that enhance their productivity. Because it is possible that our ratings of job performance do not capture all aspects of productivity, we are able to address unmeasured dimensions by controlling for differences in work attitudes.

Second, we use information on the gender of the primary breadwinner and employment status of the spouse to help further rule out the possible influence of unmeasured productivity differences. In particular, the concern that job performance ratings do not fully capture some possible productivity advantages for primary breadwinner relative to dual-breadwinner employees is more likely to apply to those primary breadwinners who have a non-working spouse as opposed to those who have a working spouse due to the non-working spouse being able to provide greater support and resources to the employee (Kanter 1977; Talbert and Bose 1977). Therefore, if job performance ratings are systematically incomplete measures of productivity, then we would expect that the employment status of the spouse would affect the

size of the primary breadwinner pay premium such that primary breadwinners with a non-working spouse would experience a *larger* pay premium relative to primary-breadwinners with a working spouse. This pattern for the pay premium would emerge for both male and female primary breadwinners if job performance ratings were, in fact, systematically incomplete measures of productivity. Alternatively, if the effect of spousal employment status on the primary breadwinner premium differs by the employee's gender such that male primary breadwinners with a non-working spouse receive a greater pay premium relative to male primary breadwinners with a non-working spouse, but this difference does not emerge for female primary breadwinners, then it is less plausible that a pay premium for primary breadwinners is driven by unmeasured productivity. Instead, such a pattern by gender of the primary breadwinner would suggest that evaluators' beliefs about traditional social roles might influence pay decisions.

3. Data and Measures

Our data consists of survey responses linked to administrative records on professional and managerial employees at the corporate headquarters of a Fortune 500 firm. We identified two groups of employees within the organization to invite to participate in our study. The first are employees belonging to a group whose purpose is to communicate on industry-relevant issues, while the second includes employees who join the group for networking and career support. We emailed survey invitations to 5,579 employees and received responses from 1,784 employees (32 percent response rate).[2] Our final sample of employees is 1,395 after we restrict the sample to those who have non-missing values for the variables used in our analysis.[3] The professional and

[2] This response rate is not unusual for organizational surveys. In other work drawing from the same survey, we did an evaluation based on interest in the survey topic and found no impact of the findings (Leslie et al. 2012).

[3] Among those dropped, 264 had missing values on variables taken from the survey, while 125 were missing information on one dimension of job performance ratings taken from administrative records due to their job level.

managerial employees represented in our sample work in a variety of functions, including product development, technology, marketing, supply chain, finance, legal, human resources, sales, etc.

3.1 Breadwinner Status

Of central importance to our analysis is a classification of employees into groups based on their breadwinner status. We construct four groups based on reported marital status and response to the question, "Who is the primary breadwinner in your household?" (response options: *Me, Both me and my spouse/partner, My spouse/partner, or Other*). Married individuals (includes those with a partner) were classified as *primary breadwinners* if they responded "Me" to the above question (48.5%), while married individuals were classified as *dual breadwinners* if they responded "Both" (26.8%). Married individuals were classified as *secondary earners* if they indicated that their spouse/partner was the primary breadwinner (4.9%).[4] Employees who indicated that they were not married and did not have a partner were grouped together as *not married* employees (19.9%).

Table 1 shows the distribution of employees across the four household types and how this varies by employee gender. Among male employees, the majority of employees are primary breadwinners (64%) and the remaining male employees are roughly split between dual breadwinners (18.1%) and not married (15.8%) employees; very few male employees are secondary earners (2.2%). The share of primary breadwinners (34.8%) and dual breadwinners (34.7%) is virtually identical among the female employees, followed by the share who are not married (23.4%) and those who are secondary earners (7.0%).

We measure breadwinner status separate from the employment status of the spouse or partner (responses: *Not employed, Employed full-time, Employed part-time*, *Not applicable*). We

[4] Employees who responded "Other" were dropped from the analysis (<0.1% of sample).

used this information to classify married employees based on whether their spouse or partner is employed (i.e. Spouse employed, Spouse not employed). Table 1 shows the distribution of the four household types by employment status of the spouse. Among primary breadwinners, two-thirds of employees have an employed spouse and one-third have a non-employed spouse. While the share of employees with a non-employed spouse is larger among male primary breadwinners relative to female primary breadwinners (37.1% vs. 26.8%), the number of female primary breadwinners with a non-working spouse is sizable (n = 69). As expected, the vast majority of employees in a dual-breadwinner household have an employed spouse or partner.[5]

Our measure of breadwinner status is self-reported and deviates from past studies, which typically use earnings or the employment status of the spouse to determine household type (i.e. primary-earner versus dual-earner household). An advantage of our approach is that it likely better aligns with the household's approach to the career of each spouse. In particular, we expect a self-report of primary-breadwinner status captures systematic investment and prioritization of that employee's career over that of her spouse or partner. Similarly, a report of dual-breadwinner status likely indicates relatively equal investment in and prioritization of the careers of both spouses. Finally, we expect that employees who indicate that their spouse/partner is the primary breadwinner are in households in which their career is secondary. Alternatively, classifying employees based solely on spousal employment status or earnings may incorrectly identify an employee as a primary breadwinner. For instance, an employee who is supporting the household financially while the actual primary breadwinner is in formal schooling would be mis-measured as the primary breadwinner based on current earnings or employment status. In addition, basing breadwinner status on earning or employment status fails to distinguish, among dual-earner

[5] The small number of dual-breadwinner employees who report their spouse is not employed may reflect temporary leaves or unemployment spells.

households, dual breadwinner household from those comprised of a primary breadwinner and secondary earner.

3.2 Descriptive Statistics for Sample

A key contribution of our study is its use of administrative data on annual pay and job performance in the analysis. In particular, past studies on the breadwinner pay premium lack direct measures of productivity and rely on self-reports of pay.[6] Our measure of pay includes both salary and incentive pay and is taken from 2009. For performance, each employee in our sample is rated on two dimensions: 1) task performance and 2) leadership performance, which are both measured on a 5-point scale and calibrated across the organization. Task performance evaluates how the individual performed on the meeting the requirements of her job in the past year, which typically includes performance on planning and organizing, administration and paperwork, technical ability, business judgment, etc. Leadership performance rates the employee on how she accomplished those tasks, including whether she was strategic, acted in an engaged matter, made decisions that advanced the goals of the organization, and effectively developed her subordinates. Conceptually, these two performance ratings are meant to capture separate dimensions of productivity, which is reflected empirically in that their correlation is approximately 0.25. These performance ratings are part of the firm's annual review process and are used to determine annual pay. The administrative data include one year of pay data and three years of prior performance ratings for each employee in our sample.

Table 2 reports descriptive statistics for the variables used in the analysis for our sample. The sample is comprised of high-earning employees; the sample mean of pay is nearly $112,600,

[6] Kirchmeyer (2006) and Wallace and Young (2008) relate characteristics of the household to direct measures of task productivity for the case of faculty (publications) and lawyers (billable hours) respectively; however, these studies do not evaluate the impact on pay.

with a standard deviation of $40,457. Due to skewness in the distribution of pay, we use the natural log in the regression analysis. For task performance ratings, the average ranges from 3.27 to 3.42 over the three years, while the average leadership performance rating ranges from 3.22 to 3.33 on a 5-point scale. We collected the remaining demographics and human capital variables from the survey. Roughly half of the sample is female (53%), the majority of employees are a parent (77.5%), and the vast majority are White (92%). The sample is highly educated in that over 90 percent have at least a Bachelor's degree, with 28% and 15% of employees having Master's and Doctoral degree. On average, individuals are 45 years olds and had been with the employer 207 months (17 years) at the time of the survey. Employees in the sample work 45.4 hours a week on average.

We include two attitudinal measures in our analysis: career aspirations and commitment. Such attitudes are positively associated with career outcomes presumably because they are related to discretionary behaviors by the employee that enhance productivity. Therefore, they may explain additional variance in pay over and above job performance ratings with pay potentially over. We measure self-reported career aspirations on the survey using a six-item scale, which includes employee response to items such as, "I am eager to get ahead in my career" (response scale 1 = Not at all true for me, to 4 = Very true for me, mean = 3.78; Gray and O'Brien 2007). To measure commitment, we use a measure affective commitment to the organization, which captures an employee's attachment to and identification with the organization (Meyer and Allen 1991). We measure affective commitment using a six-item scale with items such as, "I really feel as if [the firm's] problems are my own" (response scale from 1 = strongly disagree, to 7 = strongly agree, mean = 5.31; Leslie, Manchester, Park, and Ahn 2012).

Because our main interest is the difference in pay between employees who are primary breadwinners in comparison to those who are part of a dual-breadwinner household, we test for differences in variable means across these two groups and report the results in Table 3. Using a significance level of 5%, we see that primary-breadwinners have higher average pay, tenure, and work hours as well as are more likely to male, a parent, White, and older relative to dual-breadwinners; there is no difference in average job performance ratings, job attitudes, or educational status. We control for these differences in the regression analysis.

Table 3 also shows differences in means for dimensions of household specialization to provide richer information on the difference between primary versus dual breadwinners in terms of household decisions.[7] Consistent with a model of household specialization, we see that weekly hours spent on household chores are significantly lower for primary breadwinners versus dual breadwinners (16.08 vs. 18.80); this difference essentially offsets the lower average work hours for dual breadwinner employees. We also find that average household income is significantly higher for employees in dual breadwinner households, which earn about $48,000 more per year than primary breadwinner households. When we compare the employee's pay to reported household income, primary breadwinners earn 95 percent of the household's income, on average, while dual-breadwinners earn 61 percent. Therefore, our measure of breadwinner status maps to what we would expect in terms of relative earnings within the household.

4. Pay Differences by Breadwinner Status

Our empirical analysis evaluates if there are differences in pay between primary- and dual-breadwinners employees and to what extent they are driven by differences in productivity. As described in Section 2, we start by evaluating differences in the natural log of pay by

[7] These measures are available for a subset of our sample due to missing response.

breadwinner status controlling for human capital and demographic measures. We then account for possible pay differences stemming from job performance and self-reported career attitudes. Finally, we assess whether the pay difference between primary and dual breadwinners varies based on the employment status of the spouse. In these analyses, we consider whether the effect of primary breadwinner status on pay differs by employee gender.

Table 4 reports the regression results by breadwinner status. The coefficient on Primary Breadwinner measures the difference in the natural log of pay for employees who report they are primary breadwinners relative to those who report they are in a dual-breadwinner household (i.e. dual breadwinner is the excluded household category). Column 1 shows a positive and significant relationship between primary breadwinner status and pay relative to dual-breadwinner employees after controlling for human capital and demographic variables: those who are primary breadwinners earn 3.9 percent more than dual breadwinners. Columns 2 to 4 add three years of job performance ratings as control variables. We see that task (column 2) and leadership (column 3) performance each positively and significantly relate to pay, although leadership performance is the stronger driver of pay differences (column 4). Importantly, the primary breadwinner pay premium is essentially unaffected by including these job performance ratings. Finally, we control for differences in career attitudes and find that career aspirations are positively and significantly related to pay over and above job performance ratings (column 5). However, the pay premium for primary breadwinners remains stable at 3.3 percent and statistically significant. Throughout the specifications, female employees earn significantly less than male employees; the pay premium for primary breadwinners is of comparable magnitude to the gender pay difference.

In Table 5 we explicitly consider whether the premium for primary breadwinner status differs by gender. Column 1 of Table 5 repeats the results from column 4 of Table 4 to facilitate

a comparison. In column 2 of Table 5 we report the results after including an interaction between breadwinner status and gender. We find that the interaction between primary breadwinner and female is small in magnitude and not statistically significant, which indicates no difference in the pay premium by gender. This finding is repeated in columns 3 and 4, which show the same primary breadwinner pay premium when the sample is restricted to male and female employees respectively.

These results show a pay premium for primary breadwinners despite incorporating direct measures of productivity into the analysis. These results provide the most compelling evidence to date that the pay premium for primary breadwinners is not explained by productivity explanations. Furthermore, finding a pay premium for both male and female primary breadwinners is a contribution because much of the prior research has been restricted to men or finds no premium for females.

Importantly, it is possible that the pay premium is driven by productivity not measured by job performance ratings or career attitudes. As laid out in Section 2, we use an indirect method to assess the likelihood that the measures of productivity included in the analysis are systematically incomplete. In particular, we test to what extent the primary breadwinner premium is greater for those primary breadwinners who have a non-employed spouse relative to those with an employed spouse. We expect that a productivity advantage is more likely to manifest among primary breadwinners who have a non-employed spouse and therefore, if our measures of productivity are incomplete, then the pay premium will be largest among those with a non-employed spouse. Furthermore, we expect this pattern to emerge for both male and female employees if our measures are systematically incomplete.

Table 6 shows the results for how the pay premium for primary breadwinners differs based on the employment status of the spouse and gender. We find that primary breadwinners with a non-employed spouse have a larger premium as compared to primary breadwinners with an employed spouse (column 1) controlling for our measures of productivity. When we add the set of interaction terms between gender and breadwinner status, we find evidence that the premium for primary breadwinners with a non-employed spouse is driven by males in that the coefficient on the female interaction is negative and relatively large in magnitude (despite not being statistically significant; column 2). This gender difference is clearer when we run the analysis separately by gender. In column 3 of Table 6, we see a large and significant premium (6.9%) for primary breadwinners with a non-employed spouse relative to dual breadwinners among males; we find is no significant difference between primary breadwinners with an employed spouse and dual breadwinners among male employees. In contrast, column 4 shows an essentially equal premium for primary breadwinners with and without an employed spouse. Therefore, employment status of the spouse does not matter for female primary breadwinners, but does for males.

These results that take into account the employment status of the spouse indicate a distinct pattern of results by the gender of the primary breadwinner: the primary-breadwinner premium among males is driven by households with a stay-at-home spouse, while spousal employment status has no bearing on the primary-breadwinner premium among females. This provides additional evidence that the pay premium is not driven by productivity differences. Rather, this pattern of results suggests that social role theory is likely explains the premium for primary breadwinners among men. It is unlikely that need-based concerns drive this finding as this theory would suggest that both male and female primary breadwinners with a non-employed

spouse should receive a premium relative to those with an employed spouse. This insight leveraged our data on female primary breadwinners, which comprise a sizeable part of the labor force today as opposed to the era when seminal articles addressed the question of family structure and career outcomes.

5. Conclusion

We find evidence of a primary breadwinner premium relative to dual breadwinners in terms pay. The novel elements of our data allow us to unpack the perennial question in the literature on family structure and career outcomes as to what drives this premium. We find that the premium cannot be fully explained by better performance, superior job attitudes, or fewer household responsibilities of primary breadwinners relative to dual breadwinners. In fact, we find no evidence that primary breadwinners are better performers than dual breadwinners as measured by performance evaluations. Instead, we find evidence that the premium is likely due, in the case of male employees, to rewards conferred from conforming to social role expectations.

While these findings are important to the literature on family structure and career outcomes, they are not without limitations. First, we examine managerial workers employed at relatively high ranks within the headquarters of a Fortune 500 firm. While this enables us to collect rich data, including survey responses and administrative records, we do not know to what extent the results generalize to other workplaces, occupations, or lower level employees. Second, we measures pay at a single point in time, while differences in pay likely reflects accumulated differences over time. It is possible that the career premium for primary breadwinners we find reflects past performance; however, we address this by including three years of prior performance data. Finally, our measures of performance may not fully capture differences in

productivity or productive capacity between primary and dual breadwinners. However, if unmeasured differences were driving our results there is no reason to expect why this limitation would operate differently based on spousal employment status and gender.

This paper has multiple potential implications. First, we find that the pay premium holds for both male and female primary breadwinners, which suggests that the role of females as primary providers for the family is gaining social acceptance. However, we find evidence that social role expectations for males to be providers persists in that we that the premium for males only is presence for those with a stay-at-home spouse. Second, we find no evidence that primary breadwinners outperform dual breadwinners. This suggests that the shift in family structure from traditional households to dual-households has not negatively affected labor market productivity; rather it seems to have expanded the set of productive workers. Finally, we find evidence of bias in pay decisions in that a primary-breadwinner premium exists even after controlling for performance and job attitudes related to career success. Policies that increase transparency and accountability in reward decisions may act to reduce in the influence of subjective factors, whether they operate explicit or implicitly (Castilla 2008).

References

Becker, Gary (1985). Human capital, effort and the sexual division of labor. *Journal of Labor Economics,* 3: S33-S58.

Castilla, Emilio J. (2008). "Gender, Race, and Meritocracy in Organizational Careers." *American Journal of Sociology*, 113(2): 1479-1526.

Eagly, Alice H. (1987). *Sex differences in social behavior: A social-role interpretation*. Hillsdale, NJ: Erlbaum.

Hill, Martha S. (1979). "The Wage Effects of Marital Status and Children." *Journal of Human Resources*, 24(4): 579-594

Hotchkiss, Julie L., and Robert E. Moore (1999). On the evidence of a working spouse penalty in the managerial labor market, *52*(3), 410–423.

Jacobsen, Joyce P. and Wendy L. Rayack (1996). "Do Men Whose Wives Work Really Earn Less?" *American Economic Review*, 86(2): 268-273.

Kanter, Rosabeth. M. (1977). *Men and Women of the Corporation.* New York: Basic Books.

Kirchmeyer, Catherine. (1998). Determinants of managerial career success: Evidence and explanation of male/female differences. *Journal of Management*, *24*(6), 673–692.

Korenman, Sanders and David Neumark (1991). "Does Marriage Really Make Men More Productive?" *Journal of Human Resources*, 26(2): 284-307.

Landau, Jacqueline and Michael B. Arthur (1992). The Relationship of Marital Status, Spouse's Career Status, and Gender to Salary Level. *Sex Roles*, 27(11/12), 1992.

Leslie, Lisa M., Colleen Flaherty Manchester, Tae-Youn Park, Si Ahn Mehng (2012). Flexible work practices: A source of career premiums or penalties? *Academy of Management Journal*, *55*(6), 1407–1429.

Percheski, Christine. (2008). Opting out? Cohort differences in professional women's employment rates from 1960 to 2005. *American Sociological Review, 73*, 497-507.

Pfeffer, Jeffrey and Jerry Ross (1982). "The Effects of Marriage and a Working Wife on Occupational and Wage Attainment." *Administrative Science Quarterly*, 27: 66-80.

Schneer, Joy A., and Frieda Reitman (1993). "Effects of Alternate Family Structures on Managerial Career Paths." *Academy of Management Journal*, 36(4), 830-843.

Schneer, Joy A., and Frieda Reitman (2002). Managerial life without a wife : Family structure and managerial career success. *Journal of Business Ethics*, 25–38.

Sayer, Liana C. (2005). Gender, time and inequality: Trends in women's and men's paid work, unpaid work and free time. *Social Forces, 84,* 285-303.

Stroh, Linda K., Brett, Janette M., & Reilly, Anne H. (1996). Family structure, glass ceiling, and traditional explanations for the differential rate of turnover of female and male managers, *49*, 99–118.

Talbert, Joan and Bose, Christine E. (1977). Wage-attainment processes : The retail clerk case. *American Journal of Sociology*, *83*(2), 403–424.

Wallace, Jean E. and Marisa C. Young (2008). "Parenthood and Productivity: A Study of Demands, Resources, and Family-friendly Firms." *Journal of Vocational Behavior,* 72: 110-122.

Wang, Wendy, Kim Parker and Paul Taylor. (2013). "Breadwinner Moms." Pew Research Center, http://www.pewsocialtrends.org/files/2013/05/Breadwinner_moms_final.pdf

Williams, Joan (1999). *Unbending gender: Why family and work conflict and what to do about it*. Oxford University Press.

Table 1: Distribution of Breadwinner Status by Gender and Spousal Employment

		Male Employees			Female Employees		
	Overall	*All Males*	*Spouse Employed*	*Spouse Not Employed*	*All Females*	*Spouse Employed*	*Spouse Not Employed*
Primary Breadwinner	677	420	264	156	257	188	69
Dual Breadwinner	374	119	115	3	256	242	14
Secondary Earner	68	15	15	104	52	52	173
Not Married	277	104	NA	NA	173	NA	NA
Total	*1395*	657	394	263	738	482	256

Table 2: Descriptive Statistics for Sample

	Mean	**St. Deviation**
Pay (2009 dollars)	112596.90	40457.27
Task Performance (2009)	3.38	0.61
Task Performance (2008)	3.37	0.58
Task Performance (2007)	3.42	0.60
Leadership Performance (2009)	3.32	0.27
Leadership Performance (2008)	3.22	0.60
Leadership Performance (2007)	3.33	0.26
Parent	0.78	
Female	0.53	
Age	44.79	9.22
White	0.92	
Doctoral Degree	0.15	
Master's Degree	0.28	
Bachelor's Degree	0.48	
Associates Degree	0.06	
High School Degree	0.03	
Tenure (months)	210.98	116.24
Hours (Weekly hours)	45.36	45.36
Reported Career Aspirations	3.78	0.87
Reported Commitment	5.31	1.05

Notes: Sample size is 1395.

Table 3: Difference in Means by Primary- vs. Dual-Breadwinner Status

	N	Overall Mean	Primary Breadwinner	Dual Breadwinner	p-value for Difference
Pay (2009 dollars)	1051	117218.40	121689.50	109191.70	0.00
Task Performance (2009)	1051	3.39	3.39	3.39	0.86
Task Performance (2008)	1051	3.37	3.37	3.37	0.95
Task Performance (2007)	1051	3.42	3.42	3.42	0.90
Leadership Performance (2009)	1051	3.33	3.34	3.32	0.53
Leadership Performance (2008)	1051	3.26	3.27	3.23	0.27
Leadership Performance (2007)	1051	3.34	3.34	3.34	0.85
Parent	1051	0.84	0.87	0.80	0.00
Female	1051	0.49	0.38	0.68	0.00
Age	1051	45.01	45.89	43.44	0.00
White	1051	0.92	0.94	0.89	0.01
Doctoral Degree	1051	0.17	0.16	0.19	0.12
Master's Degree	1051	0.28	0.30	0.26	0.18
Bachelor's Degree	1051	0.48	0.48	0.46	0.45
Associates Degree	1051	0.05	0.04	0.06	0.20
High School Degree	1051	0.03	0.02	0.03	0.60
Tenure (months)	1051	218.27	230.11	197.02	0.00
Hours (Weekly hours)	1051	45.24	46.00	43.88	0.00
Reported Career Aspirations	1051	3.79	3.80	3.77	0.50
Reported Commitment	1051	5.33	5.35	5.30	0.47
Household Chores (Weekly hours)	1039	17.06	16.08	18.80	0.00
Household Income (2009 dollars)	925	154822.60	138300.90	185036.70	0.00
% of Household Income	925	0.83	0.95	0.61	0.00

Table 4: Primary Breadwinner Pay Premium

	1	2	3	4	5
Primary Breadwinner	0.039**	0.038**	0.036**	0.036**	0.033**
	(0.016)	(0.016)	(0.015)	(0.014)	(0.014)
Secondary Earner	-0.072**	-0.068**	-0.053*	-0.051*	-0.048*
	(0.032)	(0.031)	(0.029)	(0.029)	(0.029)
Not Married	-0.033*	-0.032*	-0.019	-0.018	-0.022
	(0.020)	(0.019)	(0.018)	(0.018)	(0.018)
Female	-0.040***	-0.040***	-0.042***	-0.042***	-0.040***
	(0.014)	(0.014)	(0.013)	(0.013)	(0.012)
Parent	0.058***	0.057***	0.040**	0.039**	0.036**
	(0.017)	(0.017)	(0.016)	(0.016)	(0.016)
Weekly Hours	0.003***	0.002***	0.001***	0.002***	0.001***
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Task Performance (2009)		0.034***		-0.022*	-0.023**
		(0.011)		(0.011)	(0.011)
Task Performance (2008)		0.038***		-0.001	-0.001
		(0.011)		(0.011)	(0.011)
Task Performance (2007)		0.038***		-0.023**	-0.023**
		(0.011)		(0.012)	(0.012)
Leadership Performance (2009)			0.209***	0.234***	0.229***
			(0.027)	(0.030)	(0.030)
Leadership Performance (2008)			0.065***	0.065***	0.064***
			(0.011)	(0.011)	(0.011)
Leadership Performance (2007)			0.146***	0.175***	0.162***
			(0.027)	(0.030)	(0.030)
Reported Career Aspirations					0.038***
					(0.007)
Reported Commitment					-0.009
					(0.006)
Constant	10.843***	10.429***	9.469***	9.457***	9.378***
	(0.054)	(0.079)	(0.102)	(0.103)	(0.104)
R-Squared	0.497	0.514	0.583	0.586	0.594
Observations	1395	1395	1395	1395	1395

Notes: Dependent variable is ln(pay). All regressions include controls for age, tenure (quadratic), education, hours, Division, and race. *** p-value < 0.01, ** p-value < 0.05, * p-value < 0.10

Table 5: Primary Breadwinner Pay Premium by Gender

	All Employees		Male	Female
	1	2	3	4
Primary Breadwinner	0.033**	0.036	0.035*	0.035*
	(0.014)	(0.022)	(0.021)	(0.020)
Secondary Earner	-0.048*	0.01	0.008	-0.063*
	(0.029)	(0.059)	(0.056)	(0.035)
Not Married	-0.022	-0.014	-0.031	-0.016
	(0.018)	(0.029)	(0.028)	(0.023)
Primary Breadwinner x Female		-0.002		
		(0.029)		
Secondary Earner x Female		-0.076		
		(0.067)		
Not Married x Female		-0.011		
		(0.036)		
Female	-0.040***	-0.033		
	(0.012)	(0.024)		
Parent	0.036**	0.036**	0.015	0.045**
	(0.016)	(0.016)	(0.023)	(0.022)
Weekly Hours	0.001***	0.001***	0.003***	0.001*
	(0.000)	(0.000)	(0.001)	(0.001)
Task Performance (2009)	-0.023**	-0.024**	-0.029*	-0.023
	(0.011)	(0.011)	(0.015)	(0.017)
Task Performance (2008)	-0.001	-0.001	0.003	-0.013
	(0.011)	(0.011)	(0.014)	(0.016)
Task Performance (2007)	-0.023**	-0.023**	-0.025	-0.026
	(0.012)	(0.012)	(0.016)	(0.017)
Leadership Performance (2009)	0.229***	0.230***	0.280***	0.212***
	(0.030)	(0.030)	(0.040)	(0.044)
Leadership Performance (2008)	0.064***	0.063***	0.055***	0.064***
	(0.011)	(0.011)	(0.018)	(0.015)
Leadership Performance (2007)	0.162***	0.162***	0.075*	0.241***
	(0.030)	(0.030)	(0.042)	(0.044)
Reported Career Aspirations	0.038***	0.038***	0.042***	0.038***
	(0.007)	(0.007)	(0.010)	(0.011)
Reported Commitment	-0.009	-0.008	-0.001	-0.015*
	(0.006)	(0.006)	(0.008)	(0.009)
Constant	9.378***	9.375***	9.359***	9.241***
	(0.104)	(0.104)	(0.143)	(0.154)
R-Squared	0.594	0.595	0.608	0.564
Observations	1395	1395	660	735

Notes: Dependent variable is ln(pay). All regressions include controls for age, tenure (quadratic), education, hours, Division, and race. *** p-value < 0.01, ** p-value < 0.05, * p-value < 0.10

Table 6: Primary Breadwinner Pay Premium by Spousal Employment Status and Gender

	All Employees		Male	Female
	1	2	3	4
Primary with Non-employed spouse	0.052***	0.066**	0.069***	0.029
	(0.019)	(0.026)	(0.025)	(0.031)
Primary with Employed spouse	0.024	0.018	0.014	0.038*
	(0.015)	(0.023)	(0.022)	(0.022)
Secondary Earner	-0.048*	0.01	0.008	-0.062*
	(0.029)	(0.059)	(0.055)	(0.035)
Not Married	-0.022	-0.016	-0.036	-0.015
	(0.018)	(0.029)	(0.028)	(0.023)
Primary, Non-employed Spouse x Female		-0.04		
		(0.039)		
Primary, Employed Spouse x Female		0.02		
		(0.031)		
Secondary Earner x Female		-0.075		
		(0.067)		
Not Married x Female		-0.01		
		(0.035)		
Female	-0.038***	-0.034		
	(0.012)	(0.024)		
Parent	0.035**	0.033**	0.006	0.045**
	(0.016)	(0.016)	(0.023)	(0.022)
Task Performance (2009)	-0.024**	-0.025**	-0.032**	-0.023
	(0.011)	(0.011)	(0.015)	(0.017)
Task Performance (2008)	-0.003	-0.003	-0.001	-0.012
	(0.011)	(0.011)	(0.014)	(0.016)
Task Performance (2007)	-0.023*	-0.023*	-0.023	-0.025
	(0.012)	(0.012)	(0.016)	(0.017)
Leadership Performance (2009)	0.230***	0.231***	0.285***	0.212***
	(0.030)	(0.030)	(0.040)	(0.044)
Leadership Performance (2008)	0.063***	0.063***	0.054***	0.064***
	(0.011)	(0.011)	(0.018)	(0.015)
Leadership Performance (2007)	0.162***	0.160***	0.071*	0.240***
	(0.030)	(0.030)	(0.042)	(0.044)
Reported Career Aspirations	0.039***	0.039***	0.044***	0.038***
	(0.007)	(0.007)	(0.010)	(0.011)
Reported Commitment	-0.009	-0.009	-0.001	-0.015*
	(0.006)	(0.006)	(0.008)	(0.009)
Constant	9.381***	9.381***	9.368***	9.243***
	(0.104)	(0.104)	(0.142)	(0.154)
R-Squared	0.595	0.596	0.612	0.565
Observations	1395	1395	660	735

Notes: Dependent variable is ln(pay). All regressions include controls for age, tenure (quadratic), education, hours, Division, and race. *** p-value < 0.01, ** p-value < 0.05, * p-value < 0.10