Precarious Work and Less Well Paid?
Wage Differential Between Regular and Temporary Contract Workers in India

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Abstract:
The faster growth of precarious employment vis-à-vis regular employment also has economic consequences in the sense that they immediately widen wage inequality and thus could have far reaching long term economic consequences. We examine the determinants and trends in rising wage inequality between two categories of workforce across different labour regulation regimes in India. We use a unit-level data of Employment-Unemployment Survey (EUS) for three time periods 2004-05 (61st Round), 2009–2010 (66th Round) and 2011–2012 (68th Round) across 35 Indian states. Using decomposition methods, the study argues that the wage premium for permanent contracts persists when estimated separately by age groups, education groups, gender, tenure contract security and across varied labour market regimes. Individuals with low age, low skill, and lower social strata and education, working in a highly import competitive industry and especially working in manufacturing sector receives lower wage premium. It is interesting to note that women and Muslim workers receives negative wage premium. Changing dynamics of industrial relation, reducing coverage of labour laws and lack of legal entitlements are exacerbating the wage gap between two types of workers. Precarity promotes neither economic efficiency nor decent work and hence is bad from both economic and normative lenses. Then, formalization of labour market is important.

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1. Introduction:

Globalisation has in its wake led to emergence and intensification of precarious forms of work (also referred to as flexi-forms of work) in many sectors of the economy in India and abroad (Kalleberg, 2009; Standing, 2011; ShyamSundar, 2012). The typical business strategy of the firm caught up in the intense competitive market framework is to adopt the “low road to development” by cutting costs to preserve or enhance price competitiveness. The cost of optimisation or reduction strategy of the firms often targets the easily manoeuvrable variable components of total cost which is labour cost. This strategy works well if the firm seeks to replace with or add workers who do not enjoy any form or least elements of labour market security (say, income, employment, social security) in lieu of regular workers. This strategy is premised on two strands, viz. the bargaining power of non-standard workers (or precarious) will be least and this aspect will also hurt the bargaining power of the regular workers. So the emergence and the growth of precarious employment (we prefer to use this term in place of “non-standard employment throughout the paper as this term conveys the poor plight of workers much more poignantly than the terms, non-standard employment) segments the labour market and creates economic marginalisation and social exclusion. The faster growth of precarious employment vis-à-vis regular employment also has economic consequences in the sense that they immediately widen economic inequality and thus could quickly affect aggregate demand; but they could have far reaching long term economic consequences. For example, income inequality can lead to underinvestment in education and health which are typical for development of human resources in the economy and can have even adverse implications for market economy in the sense that these human capital disabilities will affect free movement of labour which hurts the efficient working of the market forces (Dabla-Norris et al 2015). The political costs of this will be immediately obvious as they fan labour unrest and in India this issue has been held to be at
play for provocative industrial violence (ShyamSundar 2012; 2015). Hence, this is source of grave concern for labour policy of the government. The palpable economic aspect of it is that this segmentation often leads wage inequality between workers performing same work and of equal value and hence cannot be explained away by free market theories.

News reports, press anecdotes and serious research articles concerning Asia in general and India in particular have identified wealth, income and wage inequalities that have caused tremendous social and economic concern as they pose a serious challenge for social and political cohesion and have significant costs for economic growth (Economist 2015; The Hindu 2017; Chakravarty 2016; Ramaswamy 2008; OECD 2014). Wage differentials are present among various groups and sectors of the economy. In many cases, workers performing roughly similar kind of work are paid differently. Even in the same industry, wages are different across units for workers with the same level of skills. Although the pattern of wage inequality is not a reflection of the structure of overall income inequality, and in many cases, inequality in asset distribution may typically be greater than income inequality; it is noted in economic literature that wage is the largest component of income particularly for working people and its distribution seems roughly to besimilar to income distribution (Williamson 1982). Thus wage inequality has been widely used as an alternative to income inequality in the literature (Atkinson 1997).

The raging debate over the rising trend in wage inequality is, of course, not a new phenomenon. It has been resurrected in the public discourse after the publication of Global Wage Report 2016-17 by ILO in December, 2016. According to this report, in India, the highest paid top 10 per cent of income groups receive almost 43 per cent of total wages paid to all employees; whereas, the lowest-paid bottom 50 per cent income groups receives only 17 per cent of total wages paid to all employees. Moreover, the report also observes the following three important dimensions of
growing wage inequalities in India- 1) the upper tail of wage distribution is highly concentrated in the hands of 1 per cent highest-paid income groups, who enjoy more than 33 times share of total wages than the bottom 10 per cent lowest-paid income groups; 2) women workers earn 33 times less than the male workers; and finally, 3) the persistence of wage inequality within the enterprise and industrial sector is driving the total wage inequality (ILO 2016). It is evident that the large sections of the workforce have not been able to reap the dividends of high growth of Indian economy and have been excluded from the developmental outcomes. The last observation of the report brings out the important aspects of rising wage inequality, which has not received the detailed attention it deserves.

In the labour market there could be different bases of inequities such as gender; skill-based, social and religious identities and soon and these labour market inequalities have received some attention in the inequities and discrimination literature (see for e.g. Karan 2008; Ramaswamy 2008; Madeshwaran and Das 2012). But in the post-liberalization period an important flexi-type employment has become disturbingly visible thanks to their magnitude and spread and in some cases staggering numbers, i.e. temporary contract labour. In India contract labour is legal and economic parlance comprises the workers who are supplied by labour contractors to a user enterprise (popularly known as “principal employer” in India) as per the demands of the latter. It does not cover workers working in the outsourced enterprise as the latter is a different economic entity which may or may not come under the legal purview depending on the employment size of that entity. However, this may in most cases be up for being counted as “precarious workers” as many of these units forming a part of supply chain of an original equipment manufacturer (popularly known as OEM in the supply chain literature) may be “too small” to be covered either by labour laws or by trade unions or any other regulatory institution. Further the data sources in
India as we note later do not cover the entire spectrum of economic activities and cover only the organised segment of the factory sector. Given the size of India and the inadequacies of enforcement agencies, the liberalization of enforcement in the era of globalisation and the limited nature of data collection, contract workers as is understood above itself is an “under estimate” and hence of poor validity of the data universe and poor reflection of the whole magnitude of contract workers. Further, contract labour is one of the many categories of precarity in the labour market: there are other categories like casual, temporary, trainee, fixed term contract and other types of workers (see ShyamSundar 2011 for a discussion of precarity in India). Contract labour cut across all labour market and social markers such as gender, caste, religion, and immigrant and so on. When we talk of inequality of income in the labour market in the paper we mean inequality between the contract workers reported to be employed on the premises user enterprise and the directly-employed counterparts in the user enterprise in the organised factory sector in India and this aspect has not been studied in detail in the literature so far.

The growing demand for the flexi-forms of work is in fact justified by the market logic, i.e. to tackle the heightened competition and uncertainty in the product market. One the one hand, the rise of global supply chains and outsourcing in the domestic economy has further strengthened calls for the adoption of flex-forms of work. Whereas, on the other hand, various state appointed commissions, trade unions and several commentators decry the rise and growth of informalisation of work, as they see these tendencies as promoting a deficit of decent work (Mundle, 2016; ILO, 2012; Srivastava 2012).

The political economy of these issues has remained subject to much debate. While there is substantial amount of literature on employment, working conditions, social security, and economic vulnerability in the formal and informal sectors (Unni and Rani, 2008; NCEUS, 2009;
Chen, 2007; Maiti 2012; Sahoo and Neog 2016), many studies have adopted narrow definitions of the major divisions in the labour market (Aggarwal, 2009) that are unable to capture the changing dimensions of economic activity and employment relations that have accompanied the rapid pace of economic development. Recently, following NCEUS’s work, a study by Sahoo and Neog (2016) has uncovered the existence of substantial heterogeneity even within the informal sector, while also revealing the growth of substantial precarity even amongst workers employed in the formal sector. In short, much remains unknown about how liberalization has affected economic activity and employment relations throughout the Indian economy.

With this background, this article examines the determinants and trends in rising wage inequality between two categories of workforce across different labour regulation regimes.

This paper use a unit-level data from the National Sample Survey Organisation (NSSO) Employment-Unemployment Survey (EUS) for three time periods 2004-05 (61st Round), 2009–2010 (66th Round) and 2011–2012 (68th Round). For the purpose of this study, only activity code 31 shall be considered. The NSS divides regular wage workers into the following categories with respect to the length of their contract: (a) no written contract, (b) written contract for one year or less, (c) written contract for a period between one to three years, and (d) written contract for a period more than 3 years. We consider workers reported as regular workers enjoying contract tenure security more than three years as permanent workers; whereas other are temporary contract workers with different tenure security. Using the Oaxaca-Blinder decomposition method as used in Da Silva & Turrini, (2015) and Das (2008), the study argues that the wage premium for permanent contracts persists when estimated separately by age groups, education groups, gender, tenure contract security and across varied labour market regimes. Individuals with low age, low skill, and lower social strata and education, working in a
highly import competitive industry and especially working in manufacturing sector receives lower wage premium. It is interesting to note that women and Muslim workers receives negative wage premium. Changing dynamics of industrial relation, reducing coverage of labour laws and lack of legal entitlements are exacerbating the wage gap between two types of workers.

Due to limitation of the EUS data, the issue of self-selection is not taken into account, building on the expectation that the extent of self-selection bias does not vary greatly across states and industries. The problem of self selection on precarious employment is discussed in Sapkal and ShyamSundar (2017).

This paper is organized into five sections. Section 2 will provide review of previous studies. Section 3 presents an overview of data, empirical strategy and descriptive statistics. Section 4 reports the preliminary results and discussion. Finally, section 5 provides concluding remarks.

2. Review of previous studies:

Rise in wage inequality has been a matter of serious policy concern since the beginning of 1990’s. During that time it was argued that through removing barriers to trade, factor mobility and entry of new players and encouraging market completion, the Indian economy would experience higher economic growth and development. Along with this line, it was also believed that the global competition would encourage free mobility of factors of production such as labour and capital, so that the market will produce efficient outcome. In the context of labour market, wage differences in among different type of workers performing similar tasks under the same
working conditions in different jurisdiction would disappear and income levels will converge. Though, theoretically it is well argued, but indeed in reality it has resulted into more harm than ever.

Earlier studies have identified macroeconomic factors such as trade openness as a main factor in explaining increasing wage inequality in Indian economy. Increasing trade openness in India is associated with increasing labour productivity and also wage inequality among skilled and unskilled workers in the organised manufacturing sector (Galbraith et al 2004; Dutta 2005; Das 2007). One of the major explanations put forward for this rising wage inequality is the rise in relative demand for skilled labour due to skill-biased technological change as well as eroding the bargaining power of workers (Rodrik, 1997).

Sen (2008) uses industry level data from Annual Survey of Industries (ASI) for the period 1973 to 1997 to find that trade liberalization triggers the increase in wage inequality. He suggests that the decline in protection mostly for the unskilled labor-intensive industries leads to a relative fall in the economy-wide return to unskilled labor as compared to skilled labor. Furthermore, the study finds that a negative relationship between the degree of protection, which is measured as the effective rate of protection and import penetration ratio, and wage inequality at the industry level suggesting that trade-induced technological progress leads to an increase in wage inequality within industries. Moreover, Hashim and Banga (2009) use the dynamic industry panel data estimations (GMM) for 58 manufacturing industries for the period from 1998 to 2004 to find that trade liberalization leads to an increase in wage inequality between skilled and unskilled labor. In contrast to these studies, Kumar and Mishra (2005) use individual level data collected by the Indian National Sample Survey Organization (NSSO) to find that trade liberalization leads to a decrease in wage inequalities. They evaluate the impact of the 1991 trade liberalization on the
industry wage structure and find that the reduction in trade protection widens differences in wages across industries for similar workers in terms of observable characteristics over time. As different industries employ different proportion of skilled workers, changes in wages across industries translate into changes in relative incomes of skilled and unskilled workers. According to them, tariff reductions are relatively large in sectors with higher proportion of unskilled workers and these sectors experience an increase in wages, which implies that the unskilled workers experience an increasing wage relative to skilled workers. The results of this study are consistent with former studies that use plant level data from ASI.

Contrary to earlier approaches on liberalization–wage inequality relationship by aforesaid studies, a study by Mehta and Hasan (2012) argued that labour reallocations and wage shifts attributable to liberalization account for at most 29 per cent of the increased inequality between 1993 and 2004, and that effects of service sector reforms are much larger than those of trade liberalization. They further argued that the increase wage inequality is due to changes in industry wages and skill premiums.

Glinskaya and Lokshin (2005) investigated wage differentials between the public and private sectors in India, and found, by applying their own methodologies that the public sector premium ranges between 62% and 102% over the private formal sector using employment and unemployment surveys-1993-94 and 1999-2000. Galbraith et al (2004) estimated Theil indices of pay inequality, in the registered manufacturing sector in India covering the period 1979 to 1997 and observed an arising trend in pay inequality among workers within and between this sector during the post-liberalisation period. The study argues that this increase is driven primarily by increases in inequality between industry groups rather than by regional inequality. Acharyya and Marjit (2000) using data on minimum daily wages for the lowest paid unskilled workers in the
organized sector for the periods 1985-86 and 1993-94, illustrated the widening gap between the minimum and maximum wage during this period.

Recently, a study by Das (2008) have examined different dimensions of wage inequality as observed within and between different occupational groups, men and women workers in rural and urban areas by taking sectoral divisions in India after one and a half decade of economic reforms. Using the decomposition method, the study argues that a significant part of wage inequality as observed in India is accounted for by inequality “between” groups rather than inequality “within” group for every type of working people because of significant wage differences between sectors. The study further argues that the effects of education, technical skill and experiences on wage are different across sectors, and this is, probably, why wage inequality persists among workers of a roughly homogeneous type between sectors.

Notwithstanding, this study has used the dichotomous formal/informal framework and calculated the wage inequality between all types of workers. Departing from earlier approaches, a study Das (2008) attributes wage inequality increases due to industry wage differences and due to different types of groups, which corroborate with the major findings of Mehta and Hasan (2012).

Das (2012) has examined wage inequalities using information on 96,162 persons working for wages collected for the 61st Round of NSSO 2004-05. He has analysed wage inequality by nature of enterprise (informal, private sector, public sector), geography (rural and urban) and gender. He finds that while workers in the informal sector earn much less than that in the formal sector (adopting enterprise definition given by NCEUS 2005), the intra-sector wage inequality analyses reveal that inequality was higher in the private sector as compared to that in the public sector and even informal sector. This is not surprising because of the casual nature of work...
mostly prevalent in the informal sector. Wage differentials are higher in rural as compared to urban and among women as compared to men. Save for gender effects, wage inequality could be explained (by decomposition analyses) more by “between” groups rather than “within” groups or sectors. Wage inequality in their regression models is explained by education, experience and technical skills and they apply with greater force in the private sector than in others. However, it also “infers” econometrically diminishing returns to human capital in wage determination process, which is surprising given the institutional protections that exist in the private formal sector (see Das 2012 for more technical details).

Mazumdar et al (2017, b) has analysed the NSSO data over the post-reform period, i.e. 1993-94 to 2011-12 and found that while the positive real wage growth slipped especially for regular workers in the rural areas and in general during 1993-2004 during 2004-2011 (to them second phase of post-reform period) the wages of casual workers increased at a faster rate in absolute numbers (hence as growth rates also) as compared with that regular workers. They attribute to the statistical possibility (hence limitation of NSSO data) of rising proportion of contract workers (most of them are classified as precarious workers and are as worse off as casual workers in the organised sector) being counted as part of regular workers in the NSSO data base apart from positive wage effects arising out of MGNREG schemes in the rural areas (see p.59). The most significant part of the wage inequality story as per NSSO data during 2004-2011 is the radical reduction in the wage equity between regular and casual workers over the NSSO sounds and this is attributed though with caution (of more research needed) to emergence and growth of prosperous regions. The authors speculate the reasons for this as being rising incidence public employment programmes in the rural areas, shift of labour to urban areas and equitable growth of new urban centres (Ibid.). While the economic impact of MGNREG schemes has been widely
endorsed for the wage and employment outcomes in rural labour market (see for e.g. Ranganathan et al 2017), the rural-urban shift and the decentralised growth in urban areas being supportive of new urban centres could be contested – for example, the industrial and even violent conflicts in emerging industrial areas like Gurgaon, Manesar and other areas have been reflective of rising economic inequities in these regions (see ShyamSundar 2015; Jaganathan 2014).

Within the regular workers labour market, the wage distribution was more or less equitable in the pre-reform period, i.e. 1983-94 but inequality manifested in the two phases of post-reform period, 1993-2004 and 2004-2012 in the form of a ‘U’ shaped curve (dipping trend on one lower dociles and rising trend on the upper dociles). The inequality could be weakly due to rise so-called skilled employees in the information technology (IT) and IT-enabled-services and more possibly due to broad “dualism” model, i.e. dualism in the manufacturing sector (“bi-modal” distribution of employment in manufacturing sector with differing and contrasting labour productivities) and more powerfully in the service sector (low income services versus the high income services, see especially Mazumdar et al 2017).

They considered the determinants of earnings (viz. informality, education, days worked, etc.) within a multiple regression framework for the wage workers for three cycles of NSSO, 199-2000 to 2011-2012. They toy with two definitions of informality, viz. type of enterprise (enterprise definition) and access to social security (worker definition) and find that informality was greater when measured by the latter and this disparity has huge implications for inequality as well. Wage differential is moderated when enterprise definition was used while it bloated with the worker definition (p.63). On the other hand, education variable played contrasting role to the aforementioned one. Education obviously plays a less significant role with respect to worker categories (as contract workers are less likely to have education premium as compared with that
observed between tenured workers in small firms and large firms. But it is interesting to note the differential results obtained by the use of two statistical formulations of informality. The impressive and stronger results by usage of worker definition of informality drives home the fact that precarity is on the rise even in the formal establishments (see 2017, p.66).

Abraham (Undated) has used NSSO data from 1999-2000 to 2011-2012 to study inequalities between various categories of informal workers in India. Since 1999-2000 the NSSO albeit inadequately covered the social security and other aspects of labour market entitlements in their household surveys. She finds that in 2011-12, three-fourths of workers did not have access to provident fund (a form of limited social security), a little more than two-thirds had no paid leave, about four-fifths did not have access to healthcare and maternity benefits and most worryingly a little more than three-fourths had no written job contract.

**Wage Inequalities between Contract and Regular Workers: Micro-level Studies**

The micro-level studies and anecdotes offer a more radical and even worrying picture of wage equalities between the contract and regular workers. The advantage of micro-level studies over the quantitative studies using secondary data is that vital information on the terms and conditions of employment faced by contract workers are directly secured and there is no need to make convenient assumptions as in the case of quantitative studies – e.g. Sen et al (2010) find a high correlation between minimum wages issued by the states and the wages of contract workers which flies in the face of empirical realities. Rajeev (2006) finds in her survey of contract workers in Karnataka that a majority of contract workers earn less than INR 2,000 and some less than INR 1,000 (less than the minimum wages) while the regular workers earn at least INR 6,000. Bhandari (2006) uses data collected from 551 individuals working in the organized manufacturing sector in West Bengal, including Uttar Pradesh, Haryana and Delhi during 2004-05. They found “a substantial wage gap exists between permanent and contract workers where contract worker earn 45.5% less than their counterpart” (2006, p.15). V.V. Giri National Labour Institute conducted a survey and collected wage information for regular and contract workers
performing same work and wage differentials for public and private sectors are given in the figure below.

**Figure 1: Wage differential between Regular and Contract workers**

Source: Trade Union Record, AITUC, December 2012

Though performing same work, in the private sector contract workers’ wage was about 68% of the wages of the regular workers while it was lower at about 45% in the public sector and overall we find that the contract workers earn just over half of the wages earned by regular workers. Arguably, pay differential in the public sector is higher because of highly bargained wages for regular workers and exclusion of contract workers from wage bargaining – though in recent years the public sector trade unions have sought to include contract workers’ wage interests in the collective negotiations (ShyamSundar 2011).
Fig 2. Average Nominal Wages per Month of Categories of Workers (INR)

Permanent = 33688; Contract = 9561; Temporary = 8545

Source: Data from Shrouti (2016)

The IndustriAll Report on Precarious Workers in India (Undated) says that in garment and textile industry “In some workplaces permanent workers get paid double the amount that contract workers get paid, with the contract workers very often not even being paid the legal minimum wage. For doing the same jobs, contract workers get paid approximately Rs150 (€ 2.20) per day, while permanent workers receive Rs250-300 (€3.60 – 4.33) per day.” In the cement industry, “A permanent worker might get paid Rs500-600 (€8) per day. A contract worker alongside him, performing the same tasks, might only get Rs165 (€2.5).” Tom Barnes (2017), Bose and Pratap (2012) have documented wage inequalities between permanent and contract workers in the automobile industry and the disparity is much wider than that found in the ASI data – for e.g. Barnes, Das and Pratap (2015) found that in the supply chain sample in the auto-clusters in three cities contract workers earned in the range of 41% (basic pay only) to 51% (basic, allowances, bonus, etc.) of regular workers’ wages “despite being engaged in the same work or occupational
area.” (reported in Barnes 2017, p.46). The study of precarious workers in the automobile industry in Tamil Nadu by International Commission on Labor Rights reveals on the basis of interviews with workers that the ratio of wages of contract workers to permanent workers was in the range of 1:4.9 to 1:6.22 in Hyundai, 1:2.75 at a minimum in Renault-Nissan, in the range of 1:5.26 to 1:6.15 in Ford, in the range of 1:2.72 to 1:2.88 in the automobile component manufacturing factories in Tamil Nadu (calculated from the data provided by Gopalakrishnan and Mirer 2014, pp. 32-33).

Contract workers suffer from other disabilities also. The fundamental disability is the lack of employment security. It may be argued that because contract workers are cheaper as compared to permanent workers and because they could be dispensed with easily, the demand for contract workers is high resulting in some employment as opposed to their unemployment. As a result of these two, their voice security has also been affected significantly. Historically, the hiatus between the permanent and contract and other flexi-forms of workers has existed which prevented the mainstream trade unions from organizing these workers or including them in the organizations of permanent workers (Roye 2007). Over the post-reform period, as the employment security of the permanent workers began to be threatened, trade union commentators called for “solidarity” between the two segments of workers (Roye 2007) and the mainstream trade unions have paid organizational attention over them (see ShyamSundar 2011, 2015 for details on them). However, in most cases permanent workers’ unions do not admit contract workers into their trade unions though they mostly represent the demands of the contract workers (see ShyamSundar 2011; Sampath 2016; also see ex-High Court Judge, Hariparanthaman’s observations on this issue at http://tnlabour.in/unorganised-sector/5104, accessed 13 July 2017). Hence it becomes a kind of vicious cycle.
James Parry in his intensive field study of contract workers in a public sector enterprise, Bhilai Steel Enterprise (BSE) observes that the contractor maximizes his earnings as a labour supplier by paying workers at a rate far below the higher than minimum wages payment made by BSE and thus siphons off “more than half the sum that the worker should get.” (Parry 2013, p. 356) However, he found that highly skilled contract workers get wages higher than the minimum wages (see Parry 2013 for the dynamics and politics surrounding contract labour).

Building upon those studies, we argue that even within the same group of employment category, workers receive unequal wages due to their different types of tenure security, industry structures, employment status that gives more bargaining powers to few and none to majority of workforces, degrees of competition, social identity and finally, differential impact of labour market institutions. A study by Sapkal and ShyamSundar (2017), has uncovered the existence of substantial heterogeneity within the formal sector, while revealing the growth of substantial precarity even amongst those workers who are enumerated as regular workers by NSSO. Using their framework, we further add to the debate by examining the main features of the wage differences between permanent and temporary contracts and what sources are driving these differences, including the role of labour market institutions.

3.1. Data

To examine determinants of wage differentials between regular temporary contract workers with varied tenure security, we have used unit-level data from the National Sample Survey Organisation (NSSO) Employment-Unemployment Survey (EUS) for three time periods 2004-05 (61\textsuperscript{st} Round), 2009–2010 (66\textsuperscript{th} Round) and 2011–2012 (68\textsuperscript{th} Round). The NSSO surveys collect data from the households on household characteristics, individual information, earnings, economic activity status, education information, etc. This database is representative at the state-district level and has an overall response rate of 94 percent. This cross-sectional survey is the official source of nationally representative employment, and earning data used by the Government of India\(^3\). We have restricted our analyses to these three rounds since unlike the earlier surveys these rounds have collected explicit information on the employment status of an individual (whether he/she is working as temporary worker or permanent worker). Regular wage employment as defined in the National Sample Survey refers to those whose payment of salaries and wages do not depend on the periodic or daily renewal of the work contract. This category may also include those receiving piece wages, as well as full time or part time workers and paid apprentices. Data on regular wage employees are collected under activity codes 31, 71 and 72 in the NSSO schedule on employment and unemployment. For the purpose of this study, only activity code 31 shall be considered. The NSS divides regular wage workers into the following categories with respect to the length of their contract: (a) no written contract, (b) written contract for one year or less, (c) written contract for a period between one to three years, and (d) written contract for a

\(^3\)See [http://mospi.nic.in/national-sample-survey-office-nsso](http://mospi.nic.in/national-sample-survey-office-nsso), for more details pertaining to the survey, design, sampling, variables included and so on
period more than 3 years. We consider workers reported as regular workers enjoying contract
tenure security more than three years as permanent workers; whereas other are temporary
contract workers with different tenure security.

We have pooled the dataset for three rounds to conduct the empirical analysis. The three rounds
of EUS contain information on the enterprise size and type, earnings, union membership,
employment status and social security benefits to workers and most importantly, the tenure of
work contract. We have utilized this information to distinguish between organised and
unorganised sectors and between formal and informal employments. The survey rounds also
provide detailed individual and household-level information. We have excluded the employment
category of agriculture cultivators, since it does not fall under the scope of this paper.

Our main variable of interest is the average nominal wages of individual employment status -
temporary employment classified by different levels of tenure security, namely - a) no written
contract, b) less than one year contract, c) more than one year but less than three years contract,
and d) contract more than three years on the one hand and permanent employment on the other.
Unlike temporary employment, permanent employment segment of workers enjoys better wages,
employment and social security and collective bargaining rights (see ShyamSundar 2011 for a
comparison of employment conditions between the two segments of workers). The dependent
variable is the average nominal daily earnings. All explanatory variables are categorical. Our
variable of interest, type of contract, identifies individuals on permanent and temporary
contracts. Apart from these two variables of interest, the study has also used several individual
and household level control variables to estimate the components of precarious temporary
contract workers in India.
Age is aggregated in three groups. The first age group comprises workers aged between 15 and 29 years old; the second comprises workers aged between 30 and 49 years old; and the third group comprises workers aged 50 years old and older.

Education status is converted to a variable that measures the years spent in education in order to achieve the given degree. The conversion is as follows: All those who were illiterate or literate with no formal schooling were recorded as having spent 0 years in education, those below primary education were recorded as having spent 2.5 years (an average estimate), those with upper primary education had 5 years, those recorded as middle spent 8 to 10 years in secondary education, those in higher secondary spent 12 years, those with diploma or certificate course spent 13 years, graduates and post graduate education has spent 15 years and more.

The economic activity is broadly classified into - Manufacturing; Construction; Finance, insurance and real estate; trade, hotels and transport; mining, electricity and water supply; commercial, social and personal services.

**3.2. Empirical Strategy:**

The empirical estimation of the wage premium for permanent contracts needs to take into account that workers with different types of contracts differ for their characteristics and that such a difference in characteristics contributes to explain differences in average earnings. With a view to control for such differences, a human capital earnings function (Mincer, 1974) is estimated according to the following specification:

$$w_i = \beta_1 + \beta_2 \times \text{Employment\_Contract} + \beta_3 X_i + \varepsilon_i \quad \ldots \ldots \ldots (1)$$

The dependent variable, nominal earnings per day in Indian rupees, is in natural logarithm; $\varepsilon_i$ is assumed to be an independent and identically distributed error term reflecting unobservable as well as possible measurement error. Our variable of interest ($\beta_2$) – Employment\_Contract – is a
dummy variable that assumes value 1 if the individual is permanent employee and 0 otherwise. The vector of control variables includes the following individual characteristics: age group, with the excluded category being young employees, education group with excluded category of illiterate workers; gender, which assumes value 1 if female; social groups if the workers belong social marginalized groups such as Scheduled Caste (SC), Scheduled Tribe (ST) and Other Backward Class (OBC), which assumes value 1 or 0 otherwise; religion of a person is also accounted for if a worker belonging to Muslims and Other minority group, which will take value of 1 or 0 otherwise. We have also controlled for whether worker is receiving social security or not or whether he/she part of any trade unions. We have also controlled for industries such as - Manufacturing; Construction; Finance, insurance and real estate; trade, hotels and transport; mining, electricity and water supply; commercial, social and personal services.

We first estimate the model by OLS for the pooled sample with country fixed-effects and then we estimate the model for each single country. The estimate for $\beta_2$ obtained in equation (1) gives the wage premium (penalization) for holding a permanent contract. The estimation of equation (1) also gives an overview of the earnings formation in the 35 states including Union Territories of India, based on three rounds of EUS.

Next, we analyze the gap in the average nominal daily earnings by type of employment contract by means of the Oaxaca-Blinder decomposition (Oaxaca, 1973; Blinder, 1973). This decomposition is based on the separate estimation for permanent and temporary workers of the Mincerian-type equation above. After the estimation of the model jointly for fixed-term and permanent workers, the difference of the average earnings between the two groups can be decomposed as follows:

$$
\bar{W}_P - \bar{W}_T = (\bar{X}_P - \bar{X}_T)\hat{\beta}^* + \{\bar{X}_P(\hat{\beta}_P - \hat{\beta}^*) + \bar{X}_T(\hat{\beta}^* - \hat{\beta}_T)\} ................ (2)
$$

where $\bar{W}_P$ and $\bar{W}_T$ are the average earnings for permanent and temporary workers; $\bar{X}_P$ and $\bar{X}_T$ are the observed average characteristics and permanent and temporary workers; $\hat{\beta}_P$, $\hat{\beta}_T$ and $\hat{\beta}^*$ are the coefficients estimated using equation (1) for permanent, temporary and joint
estimation respectively. The first term on the right-hand side of equation (2) is the "explained component": itrepresents the contribution of individual characteristics in explaining earnings differences between the two types of contract. The second term is the "unexplained component", which is the difference in the coefficients or how different characteristics are rewarded differently between the two groups and is equal to the estimate for $\beta_2$ obtained in equation (1).

3.3. An Overview of Precarious Contract Employment and Wage Inequality

In this section, we will analyze the descriptive statistics of precarious contract workers in India. In Table 1, it can be seen that the share of temporary contract workers has increased from 19.36 percent to 29.03 percent between 2004-05 to 2011 to 12. The share of permanent workers has decreased to 70.97 percent between 2004-05 to 2011 to 12. Temporary tenure of employment contract is also coupled with a weak bargaining power among these workers. The gender composition of temporary employment indicates that male workers are likely to secure permanent employment than female workers. The share of women workers enjoying permanent employment status has declined by approximately by 6 percent. Approximately 70 percent of temporary contract workers do not have trade union membership. Economic activity among precarious workers show that the majority of precarious workers have regular or casual wage contracts which means that flexibility in tasks demanding regular employment and casual also.
## Table 1: Extant of Temporary Contract Employment in India (in %)

<table>
<thead>
<tr>
<th></th>
<th>2004-05 (61st round EUS)</th>
<th>2009-10 (66th round EUS)</th>
<th>2011-12 (68th round EUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Permanent</td>
<td>Temporary</td>
<td>Permanent</td>
</tr>
<tr>
<td>Type of Employment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>78.12</td>
<td>19.36</td>
<td>74.17</td>
</tr>
<tr>
<td>Trade Union Membership</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>76.54</td>
<td>59.44</td>
<td>73.66</td>
</tr>
<tr>
<td>No</td>
<td>32.13</td>
<td>36.5</td>
<td>26.33</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>77.4</td>
<td>28.6</td>
<td>74.91</td>
</tr>
<tr>
<td>Female</td>
<td>42.51</td>
<td>53.7</td>
<td>39.71</td>
</tr>
<tr>
<td>Economic Activity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self Employed Own Account workers</td>
<td>39.54</td>
<td>36.39</td>
<td>47.51</td>
</tr>
<tr>
<td>Self Employed Employer</td>
<td>1.10</td>
<td>1.77</td>
<td>3.41</td>
</tr>
<tr>
<td>Unpaid family workers</td>
<td>17.57</td>
<td>15.27</td>
<td>19.10</td>
</tr>
<tr>
<td>Wage/salary workers</td>
<td>20.43</td>
<td>22.33</td>
<td>16.94</td>
</tr>
<tr>
<td>Casual wage labour in public works</td>
<td>3.15</td>
<td>1.10</td>
<td>1.58</td>
</tr>
<tr>
<td>Casual wage labour in other works</td>
<td>18.21</td>
<td>23.12</td>
<td>11.46</td>
</tr>
</tbody>
</table>

Source: Authors’ own calculations based on NSSO data. Note: Figures do not add up to 100.

Approximately, 80 percent of temporary contract workers do not have a written contract (Table 2). The share of contract workers holding tenure of less than one year has doubled between 2004-5 to 2011-12. Whereas the proportion of temporary workers holding contract tenure less than less years has also reduced to 1.51 percent in 2011-12. The share of contract workers holding tenure of more than 3 years declined by approximately, 11 percent during the period between 2004-05 to 2011-12.
Table 2: Tenure of job contract for temporary employment in India

<table>
<thead>
<tr>
<th></th>
<th>2004-05 (61\textsuperscript{st} round EUS)</th>
<th>2009-10 (66\textsuperscript{th} round EUS)</th>
<th>2011-12 (68\textsuperscript{th} round EUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Written Contracts</td>
<td>67.45</td>
<td>76.13</td>
<td>79.55</td>
</tr>
<tr>
<td>&lt;1 year</td>
<td>7.45</td>
<td>3.09</td>
<td>16.59</td>
</tr>
<tr>
<td>&gt; 1 year and &lt; 3 years</td>
<td>3.41</td>
<td>2.17</td>
<td>1.51</td>
</tr>
<tr>
<td>&gt; 3 years</td>
<td>22.56</td>
<td>19.62</td>
<td>13.35</td>
</tr>
</tbody>
</table>

Source: Authors’ own calculations based on NSSO data. Note: Figures do not add up to 100.

Figure 3 shows the distribution of average daily nominal wages between contract and regular workers across 35 states of India. Differences across states are wide. It is evident that temporary contract workers earn on an average 50 percent less wages than regular workers. The magnitude of wage inequalities varies between 36 % to 50 % across sample states for the period between 2004-05 to 2011-12. In Figure 4, we can see that across all four type of different tenure contract employment wage inequality persist unequivocally. Dispersion of wage inequality in average daily earnings across Indian states indicate that, it has deleterious impact on the entire economy irrespective of major economic reforms or growth.
Figure 3: Average Nominal Daily Earnings in Rs: Across all Indian States

Source: Authors’ own calculations based on NSSO data.

Figure 4: Average Nominal Daily Earnings in Rs: Across all Indian States and by varies tenure of temporary contract

Source: Authors’ own calculations based on NSSO data.
4. Empirical analysis and results:

4.1. Basic results:

Estimation results of equation (1) for the pooled observations for all 35 Indian states and union territories are represented in Table 1. Workers holding permanent employment contract are earning approximately 41 percent point more wages/salaries than those who are holding temporary contracts. Earning increases with age, however the growth in their earning is higher when workers are more than 50 years and above. Surprisingly, there is negative wage premium for women workers in India, this attest to the global trend of gender disparity in labour markets. Three rounds of EUS survey covers the period of 2004-2012, which is marked by the period of exceptionally, high growth rate for India. This high growth rate was accompanied by decline in female labour force participation.

There are factors such as rising household income, lack of quality jobs, the separation of home and work, and stigma might explain declines in female participation. However, we infer that the negative wage premium in permanent employment could be one of that factors that may have reduced the female labour force participation.

The employment status of worker is largely influenced by the education level. In Table (3) we see that, labour market entrants who have primary and upper primary education are getting negative wage premium in the regular employment. As the education level rises, workers with higher education attainment earn on an average more than those who possess lower education qualifications. It is also observed that having technical education increases the wage premium, having no formal technical education decreases chances of getting employed in the regular
employment. Hence it can argued that the having technical education along with other formal educational qualifications enables workers enables workers to enjoy the better of prospect of

**Table 3: Mincerian regression, estimates with pooled observations across Indian states and three rounds of EUS**

<table>
<thead>
<tr>
<th>Explanatory variables</th>
<th>Coefficients</th>
<th>Standard Errors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of contract</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permanent</td>
<td>0.411***</td>
<td>0.017</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30-49</td>
<td>0.044***</td>
<td>0.011</td>
</tr>
<tr>
<td>50 and above</td>
<td>0.086**</td>
<td>0.010</td>
</tr>
<tr>
<td>Gender Female</td>
<td>-0.260***</td>
<td>0.003</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>-0.063***</td>
<td>0.007</td>
</tr>
<tr>
<td>Upper primary</td>
<td>-0.071***</td>
<td>0.004</td>
</tr>
<tr>
<td>Secondary</td>
<td>0.086***</td>
<td>0.042</td>
</tr>
<tr>
<td>Higher Secondary</td>
<td>0.093**</td>
<td>0.013</td>
</tr>
<tr>
<td>Graduation and above</td>
<td>1.492**</td>
<td>0.036</td>
</tr>
<tr>
<td>Technical Education</td>
<td>0.009***</td>
<td>0.178</td>
</tr>
<tr>
<td>Region (Urban)</td>
<td>0.429***</td>
<td>0.023</td>
</tr>
<tr>
<td><strong>Skill level of the occupations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest Skill Jobs</td>
<td>0.138**</td>
<td>0.018</td>
</tr>
<tr>
<td>High Skill Jobs</td>
<td>0.215**</td>
<td>0.027</td>
</tr>
<tr>
<td>Highest Skill Jobs</td>
<td>1.285***</td>
<td>0.014</td>
</tr>
<tr>
<td><strong>Social groups</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scheduled Caste</td>
<td>0.084**</td>
<td>0.011</td>
</tr>
<tr>
<td>Scheduled Tribe</td>
<td>0.029**</td>
<td>0.024</td>
</tr>
<tr>
<td>Other Backward Class</td>
<td>0.095**</td>
<td>0.029</td>
</tr>
<tr>
<td><strong>Religious Groups</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muslims</td>
<td>-0.161*</td>
<td>0.095</td>
</tr>
<tr>
<td>Other religious minorities</td>
<td>0.050**</td>
<td>0.021</td>
</tr>
<tr>
<td><strong>Workers status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social security</td>
<td>0.124***</td>
<td>0.038</td>
</tr>
<tr>
<td>Trade union membership</td>
<td>0.139***</td>
<td>0.026</td>
</tr>
<tr>
<td><strong>Industrial classification</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td>0.004*</td>
<td>0.047</td>
</tr>
<tr>
<td>Construction</td>
<td>0.099***</td>
<td>0.023</td>
</tr>
<tr>
<td>Finance, Insurance and Real Estate</td>
<td>0.190***</td>
<td>0.059</td>
</tr>
<tr>
<td>Trade, Hotels and Transport</td>
<td>0.050***</td>
<td>0.016</td>
</tr>
<tr>
<td>Mining, Electricity and Water supply</td>
<td>0.075**</td>
<td>0.029</td>
</tr>
<tr>
<td>Commercial, Social &amp; Personal Services</td>
<td>0.051*</td>
<td>0.030</td>
</tr>
<tr>
<td><strong>Degree of competition</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Import Penetration</td>
<td>-0.161**</td>
<td>0.095</td>
</tr>
<tr>
<td>Export Orientation</td>
<td>0.077**</td>
<td>0.013</td>
</tr>
<tr>
<td>State dummies</td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>2.148***</td>
<td>0.009</td>
</tr>
<tr>
<td><strong>Number of observations</strong></td>
<td>116,183</td>
<td></td>
</tr>
<tr>
<td><strong>Pseudo R</strong></td>
<td>0.6542</td>
<td></td>
</tr>
</tbody>
</table>
getting into permanent employment. Regular workers in urban areas are paid much better than those in rural areas. Due to both push (low productivity and low wage agricultural sector) and pull (renewed policy stress on urbanization like smart cities) young people migrate to urban areas in search of better livelihood opportunities and this increases the supply of labour force in almost all urban areas. Urban informal sector becomes the destination centre for these migrants and they queue in it with the hope of securing a “standard employment” position (see Breman 2011; Mitra 2014), as it is observed that after certain years of experiences (as we capture through the age), these workforces engage into regular employment either in private or public sector. Socially marginalized groups are at the odds of receiving regular employment with longer tenure security. We report that workers belonging to SC, ST and OBC social groups are marginally better off in receiving positive wage premium; this is due to the reservation policy of the state that encourages their representation into the government/semi-government/aided institutions. Wage premium turn out to be negative for regular workers belonging to Muslim minorities whereas it is positive for other minorities. This further attest to the fact that workers are Muslim minority communities still discriminated in the labour market. A worker who is receiving social security and is associated with the trade unions enjoys the positive wage premium. This indicates that the collective bargaining plays a pivotal role in increasing wages of the workers. Workers working in the Construction and Finance, insurance and real estate industries enjoys higher positive wage premiums than those employed in manufacturing; trade, hotels and transport; mining, electricity and water supply; commercial, social and personal services industries. During the period 2004-2012, these two industries enjoyed highest growth than other industries due to larger inflow of Foreign Direct Investment.
Workers working in industries which faces high import competition are receiving negative wage premiums due to high product market competitions that drive out less productive firms. The magnitude of the penalty is sizable. However, when faced with a positive demand, such as having export oriented, workers enjoys marginally better high wage premium. Results reported in Table (3) are in line with expectations.

**Table 4: Permanent employment wage premium: Oaxaca-Blinder decomposition**

<table>
<thead>
<tr>
<th></th>
<th>Difference</th>
<th>Explained</th>
<th>Unexplained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pooled</td>
<td>0.403**</td>
<td>0.168**</td>
<td>0.135**</td>
</tr>
<tr>
<td>Andaman &amp; Nicobar Islands</td>
<td>0.107**</td>
<td>0.021**</td>
<td>0.143**</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>0.118**</td>
<td>0.025**</td>
<td>0.325**</td>
</tr>
<tr>
<td>Arunachal Pradesh</td>
<td>-0.016*</td>
<td>0.072**</td>
<td>0.174**</td>
</tr>
<tr>
<td>Assam</td>
<td>0.260**</td>
<td>0.025**</td>
<td>0.129**</td>
</tr>
<tr>
<td>Bihar</td>
<td>0.452**</td>
<td>0.287**</td>
<td>0.165**</td>
</tr>
<tr>
<td>Chandigarh</td>
<td>0.426**</td>
<td>0.220**</td>
<td>0.206**</td>
</tr>
<tr>
<td>Chattisgarh</td>
<td>0.304**</td>
<td>0.166**</td>
<td>0.138**</td>
</tr>
<tr>
<td>Dadra &amp; Nagar Haveli</td>
<td>0.213**</td>
<td>0.049*</td>
<td>0.164**</td>
</tr>
<tr>
<td>Daman &amp; Diu</td>
<td>0.274**</td>
<td>0.140**</td>
<td>0.135**</td>
</tr>
<tr>
<td>Delhi</td>
<td>0.114**</td>
<td>0.237**</td>
<td>0.02**</td>
</tr>
<tr>
<td>Goa</td>
<td>0.404**</td>
<td>0.202**</td>
<td>0.203**</td>
</tr>
<tr>
<td>Gujarat</td>
<td>0.027**</td>
<td>0.002**</td>
<td>0.025**</td>
</tr>
<tr>
<td>Haryana</td>
<td>0.274**</td>
<td>0.140**</td>
<td>0.135**</td>
</tr>
<tr>
<td>Himachal Pradesh</td>
<td>0.199**</td>
<td>0.101**</td>
<td>0.098**</td>
</tr>
<tr>
<td>Jammu &amp; Kashmir</td>
<td>0.235**</td>
<td>0.114**</td>
<td>0.121**</td>
</tr>
<tr>
<td>Jharkhand</td>
<td>0.138**</td>
<td>0.321**</td>
<td>0.245***</td>
</tr>
<tr>
<td>Karnataka</td>
<td>0.158**</td>
<td>0.142**</td>
<td>0.168**</td>
</tr>
<tr>
<td>Kerala</td>
<td>0.282**</td>
<td>0.111**</td>
<td>0.170**</td>
</tr>
</tbody>
</table>
Table 4 displays the Oaxaca-Blinder decomposition results for various Indian states. The first column shows the difference in mean predictions between permanent and temporary workers. The second column represents the explained component, or the increase in mean wage if temporary workers had the same characteristics as permanent workers. The third column indicates the unexplained component, which is the wage gap. Our estimates suggest a 0.403 log point wage differential between permanent and contract workers, with around 60% of the gap explained through observable characteristics.

<table>
<thead>
<tr>
<th>State</th>
<th>Difference</th>
<th>Explained</th>
<th>Unexplained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lakshadweep</td>
<td>-0.068*</td>
<td>0.100**</td>
<td>0.033*</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>0.100**</td>
<td>0.066**</td>
<td>0.034**</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>0.286***</td>
<td>0.036**</td>
<td>0.239**</td>
</tr>
<tr>
<td>Manipur</td>
<td>0.167**</td>
<td>0.048*</td>
<td>0.119**</td>
</tr>
<tr>
<td>Meghalaya</td>
<td>0.161**</td>
<td>0.056**</td>
<td>0.105**</td>
</tr>
<tr>
<td>Mizoram</td>
<td>0.165**</td>
<td>0.071**</td>
<td>0.094**</td>
</tr>
<tr>
<td>Nagaland</td>
<td>0.165**</td>
<td>0.090**</td>
<td>0.075**</td>
</tr>
<tr>
<td>Orissa</td>
<td>0.268**</td>
<td>0.111**</td>
<td>0.158**</td>
</tr>
<tr>
<td>Pondicherry</td>
<td>0.071*</td>
<td>0.03*</td>
<td>0.101**</td>
</tr>
<tr>
<td>Punjab</td>
<td>0.276**</td>
<td>0.194**</td>
<td>0.083**</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>0.291**</td>
<td>0.146**</td>
<td>0.144**</td>
</tr>
<tr>
<td>Sikkim</td>
<td>0.001**</td>
<td>-0.185*</td>
<td>0.186**</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>0.268**</td>
<td>0.111**</td>
<td>0.158**</td>
</tr>
<tr>
<td>Tripura</td>
<td>0.151**</td>
<td>0.044*</td>
<td>0.108**</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>0.208**</td>
<td>0.093**</td>
<td>0.114**</td>
</tr>
<tr>
<td>Uttaranchal</td>
<td>-0.114***</td>
<td>0.037**</td>
<td>0.012*</td>
</tr>
<tr>
<td>West Bengal</td>
<td>0.424**</td>
<td>0.247**</td>
<td>0.103**</td>
</tr>
</tbody>
</table>

Note: *** p<0.01, ** p<0.05, *p<0.1. Standard errors are heteroskedasticity robust.
characteristics of permanent workers. Once we adjust those observable characteristics with permanent workers approximately 40 percent unexplained gap still exists. At the state level the Oaxaca-Blinder decomposition results show that the predicted differences in average earnings between permanent and temporary workers are positive except in Arunachal Pradesh, Uttaranchal Pradesh and Lakshadweep. This difference is small but statistically significant. While the difference is high in Bihar, Chandigarh and Goa. In general, a substantial share of the predicted difference in wages between permanent and contract workers is explained by the endowments of each group. In almost all states, more than 50 percent of the earning differences is explained by the endowments factors.

4.2. Wage Premium of Permanent Workers: Disaggregated Results

To examine the magnitude of premium wages across workers group, we estimate equation (1) separately for: Age, education category, types of contract and gender. The stratification of the sample allows us to explore the structure of the wage premium. Table 5 shows that, the younger cohort of permanent workers enjoys 15 percent wage premium as compared to temporary workers. This is possible due to many new entrant joins as a trainee/apprentice in a firm and usually used as screening devise who are mandated to receive minimum wages as set by the state. But as we move towards the middle age cohort their wage premium is marginally better for permanent workers as compared to their counterparts. However, it is interesting to note that the positive wage premium becomes high when they are in the age cohort of 50 years and above. Due to seniority, the incremental mandated benefits yield them high wage premium and due to better coverage of employment laws as far as regular employment is concerned. It is also observed that senior most workers better paid so that they tend to discourage younger workers for not forming the trade union and being voiceless in the organisation (Roye, 2007). In many
developed countries, the wage premium is highest for middle age workers and lowest for younger and older cohorts; however, this is not the case in India, as worker become a permanent he/she tend enjoy high premiums as per their seniority. The same pattern is also observed in across Indian states, especially states which are typically recognised as pro-workers states.

Table 5: Permanent contract wage premium: estimation results by age group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Pooled Coefficient</th>
<th>Standard Error</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>Coefficient</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-29</td>
<td>0.154**</td>
<td>0.006</td>
<td>0.196**</td>
<td>0.019</td>
<td>1.015***</td>
<td>0.014</td>
</tr>
<tr>
<td>30-49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 &amp; above</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: *** p<0.01, ** p<0.05, *p<0.1. Standard errors are heteroskedasticity robust.

State wise estimates are not reported but are available upon request.

The next sensitivity analysis involves the estimation of our empirical model by education groups. The employment status of worker is largely influenced by the education level. With the rise in every year of education, the probability to receive higher wages increases. In our case, it is expected that highly educated worker may receive higher wage or lower wage premium. Highly educated workers act as an asset for firms since they have invested heavily in order to retain them, implying a better bargaining position. As the bargaining power increases with increase in education status, then it is possible that the wage differential between both types of workers may be reduced. At the low educational level, workers can be easily substitutable, as it is used as *badli* workers, and most of the time they perform perennial task. Hence, due to this, it may be possible that workers in regular employment with lower education status are marginally better off as relative to their counterparts in temporary employment.
<table>
<thead>
<tr>
<th></th>
<th>Primary</th>
<th>Upper primary</th>
<th>Secondary</th>
<th>Higher Secondary</th>
<th>Graduation and above</th>
<th>Technical Education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coeff</td>
<td>S.E.</td>
<td>Coeff</td>
<td>S.E.</td>
<td>Coeff</td>
<td>S.E.</td>
</tr>
<tr>
<td>Pool</td>
<td>0.023**</td>
<td>0.004</td>
<td>0.084**</td>
<td>0.131</td>
<td>0.092**</td>
<td>0.045</td>
</tr>
<tr>
<td></td>
<td>1.004**</td>
<td>0.026</td>
<td>1.162</td>
<td>0.048</td>
<td>0.075**</td>
<td>0.0135</td>
</tr>
</tbody>
</table>

Note: *** p<0.01, ** p<0.05, * p<0.1. Standard errors are heteroskedasticity robust.

$ State wise estimates are not reported but are available upon request.

In Table 6, it is evident that the wage premium for a permanent worker with primary education is 0.023 percent relative to contract worker. As the education qualification increases, permanents workers earns higher wage premium. At higher secondary level, permanent workers earn 1.004 percent wage premium, and 1.162 percent premium when they have gradation and above education qualification. We report that the wage premium for permanent contracts is the lowest for primary and upper primary education workers, with the highest premium being either for higher secondary and graduation and above. It is interesting to note that wage premium for workers having technical education is abysmally low; indicating that technical and vocational skilling programmes are failing to reap its dividends. This result also corroborate with the result of Agrawal (2012) which finds a high rate of unemployment (11%) in the age group 15–29 years and the youth’s are not attracted towards traditional model of vocational and technical education prospects.

Employment contract tenure plays an important role in establishing employee-employer relationship as well as accessing legal entitlements under Indian labour laws. Sapkal and ShyamSundar (2017) argued that every increase in the contract tenure, probability of getting into
regular employment increases. As it allows both employees and employers to invest into relation-specific employment contract as well as it reduces the labour turnover. It also strengthens the bargaining of workers within firm. As pointed out in Table 2, more than 70 percent of workers are enumerated by NSSO do not have formal written contract. Lack of written contract is serious concern, as it does not recognise them as workers. In table 7, we estimated the wage premium of permanent workers across different employment contract.

**Table 7: Permanent contract wage premium: estimation results by contract tenure**

<table>
<thead>
<tr>
<th></th>
<th>No Written Contract</th>
<th>Less than one year</th>
<th>More than one but less than three year</th>
<th>More than three years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coeff</td>
<td>-0.032</td>
<td>0.081**</td>
<td>0.116**</td>
<td>0.395**</td>
</tr>
<tr>
<td>S.E.</td>
<td>0.0511</td>
<td>0.029</td>
<td>0.0193</td>
<td>0.0216</td>
</tr>
</tbody>
</table>

Note: *** p<0.01, ** p<0.05, * p<0.1. Standard errors are heteroskedasticity robust.

5 State wise estimates are not reported but are available upon request

Results indicate that, permanent workers with no written contracts receives negative wage premium, as these contracts are recognised by labour laws. In this case, it is possible that many old workers usually engaged into manual jobs, return to their work after their retirement. This type of mechanism is possible under two circumstances, where the employer has tremendous faith in that particular worker- the impact of long duration relation specific mutual contractual arrangements. Secondly, due to the growing concern of ageing society and nuclear families, retired workers prefer to resume their routine working life as a post retirement engagement. In both conditions, the wage does not act as main factor in incentivising workers to return to normal working life. With less than one year contract tenure, premium for permanent workers is 0.081

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4 This phenomenon is visible in many urban areas and it is evident as most job search portals offer special jobs for retired persons.
percent relative to contract workers. The wage premium becomes significantly high 0.395 percent for permanent workers holding tenure contract of more than three years.

So far we have examined that there is a substantial permanent contract wage premium that cannot be explained by observable characteristics of individuals. There are various legal institutions and industrial relation factors which are pivotal for shaping the differences in wage premium across India. Higher protection for permanent workers as compared to that of contract workers, the higher their bargaining power and wage. In Table 8, we present the estimated result on wage premium of permanent workers across different labour regulations in India. We have divided 35 Indian states into three categories using the framework suggested by Gupta et.al. (2009) - Pro-workers states, Pro-employers states and Neutral states.

**Table 8: Permanent contract wage premium: estimation results by labour regulation regimes**

<table>
<thead>
<tr>
<th></th>
<th>Pro-Worker States</th>
<th>Pro-Employer States</th>
<th>Neutral States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coeff</td>
<td>0.196**</td>
<td>0.027*</td>
<td>0.008*</td>
</tr>
<tr>
<td>S.E.</td>
<td>0.0795</td>
<td>0.0209</td>
<td>0.0371</td>
</tr>
</tbody>
</table>

Note: *** p<0.01, ** p<0.05, * p<0.1. Standard errors are heteroskedasticity robust.

$ State wise estimates are not reported but are available upon request

In Table 8, we can see that permanent workers in pro-worker states enjoy 0.196 percent wage premium as compared to their counter parts. Whereas the wage premium decreases if a worker is working in pro-employer states and it becomes almost negligible if a worker is working in natural states. Our results indicate that a wider coverage of labour laws that allows them to have
more bargaining power and voice result into reduction in wage inequality between permanent and temporary contract workers.

5. Conclusion:

The growing incidence of precarious employment across all sectors is a serious challenge for the developing country like India. The faster growth of precarious employment vis-à-vis regular employment also has economic consequences in the sense that they immediately widen income inequality. In this paper we analysed wage differences between permanent and temporary contracts workers using nationally representative Employment-Unemployment Survey of India. Individual characteristics explain a large part of the observed wage gap between contract and permanent workers. However, a substantial fraction of the gap remained unexplained. Building upon earlier studies, we argue that even within the same group of employment category, workers receive unequal wages due to their different types of tenure security, industry structures, employment status that gives more bargaining powers to few and none to majority of workforces, social identity and finally, differential impact of labour market institutions.

The wage premium for permanent contracts persists when estimated separately by age groups, education groups, gender, tenure contract security and across varied labour market regimes. Individuals with low age, low skill, and lower social strata and education, working in a highly import competitive industry and especially working in manufacturing sector receives lower wage premium. It is interesting to note that women and Muslim workers receives negative wage premium. Since the last one decade, the major focus is on providing skills and vocational training programmes for creating decent employment. Our results indicate that the technical education should be designed considering the skills requirements of the markets. Departing from
an earlier analysis on human capital variables, we have also accounted for macroeconomic factors such import competition strengths and labour regulation regimes in determining the wage inequality between two types of workers. Changing dynamics of industrial relation, reducing coverage of labour laws and lack of legal entitlements are exacerbating the wage gap between workers. The employment protection laws are not causing rigidity is evidenced by high level of precarity in terms of high incidence of non-formal-contract workers. But rather it is providing an evidence for reduced inequality. Precarity promotes neither economic efficiency nor decent work and hence is bad from both economic and normative lenses. Then, formalization of labour market is important.
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