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What is This?

Counting and Understanding the Contingent Workforce: Using Georgia as an Example

Cathy Yang Liu and Ric Kolenda

Abstract

Contingent workers are a large and increasingly important segment of the US labour force. This paper uses the Contingent Work Supplement of the Current Population Survey to gain some understanding of this workforce and to link that information to larger on-going annual and decennial surveys for sub-national-level estimation and analysis. A typology is developed of the non-standard workforce based on their work arrangement and the industries in which they concentrate; with four types of worker: contingent core, standard workers in contingent industries, non-standard workers in traditional industries, and traditional workers. The state of Georgia is used as an example of a regional economy that has experienced much economic growth in recent years and possibly a surge in contingent workforce as well. Characterising these workers by demographic and economic characteristics demonstrates much diversity across these four groups. Possible policy implications on employment quality and economic development are also discussed.

Introduction

Contingent work arrangements are not new, but the growth in size and importance of this segment of the labour force has led to an increase in interest from researchers and policy-makers alike in recent years. The concept of the contingent workforce can be traced to the study of 'peripheral workers' in the early industrial age (Adler and Adler, 2004) and the term 'contingent work arrangements' was first used by Audrey Freedman in 1985 (p. 35) to describe workers with a loose affiliation to their primary employers (Polivka and Nardone, 1989, pp. 9-10). Others have defined contingent workers as those lacking a 'long-term attachment to their employers'

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(Belous, 1989b). An alternative, more detailed definition of contingency is suggested by Polivka and Nardone (1989, p. 11), who identify contingent workers as those without "explicit or implicit contract for long-term employment." More specifically, these are workers who: lack job security; have unpredictable work hours; and, lack access to benefits typical of traditional work arrangements.

Global economic restructuring and liberalised labour markets across the world contribute to the increasing importance of contingent work arrangements. Rising global competition, deregulated employment regimes, decline in union density and immediate financial concerns all push profit-driven firms towards non-standard, flexible and contingent employment (Peck, 2008; Peck et al., 2005). In the US, the deindustrialisation from a manufacturing-based economy to a service-based economy and subsequent expansion of the service sector generate demand for flexible labour (Doussard et al., 2009). Workplace restructuring is further associated with the advancement in information and communication technology (ICT) that loosened workplace attachment and enabled a shift away from traditional jobs (Carnoy et al., 1997; Giuliano, 1998).

Counting and understanding this group of workers have important implications for public policy. Gleason suggests three reasons for the increased attention on contingent workers: the fact that their numbers are likely to increase as the labour force continues restructuring; the importance of this segment to the concept of 'good jobs'; and, the fact that contingent work is dominated by women, younger workers and minorities (Gleason, 2006, pp. 1–2). Contingent employment is usually characterised by lower pay, inadequate work conditions, limited career development opportunities, short job tenure and lack of

access to unions and social protection (Mehta and Theodore, 2003). At the same time, the impact of this workforce on both employer-provided health and pension benefits and government-provided Unemployment Insurance, and employee protection laws such as family leave, job safety and minimum wage regulations, is worth noting (Wenger, 2006). In addition to the implications of contingent work for employers and workers, there is an important macroeconomic interest in a timely count of such workers as well. It is argued that contingent workers can be a 'canary in a coal mine' for predicting economic conditions, acting as a leading indicator of employment trends (Muhl, 2002). Evidence from the 2001 recession showed that, while temporary agency workers as a group represented only 2.5 per cent of the workforce, they accounted for more than a quarter of net job losses in the labour market (Peck and Theodore, 2007).

Despite its growing importance, estimating the number of contingent and non-standard workers has never been easy due to inconsistent definitions, inadequate measures and limitation in data availability (Kalleberg, 2000). Earlier attempts to do so include those of Belous (1989a), Giuliano (1998) and Spalter-Roth and Hartmann (1998). Belous (1989a) based his estimates on the count of four groups of workers: those self-identified as temporary workers, part-time workers, self-employed workers from the Bureau of Labor Statistics household survey and business services workers from the Current Employment Statistics (CES) firm survey. The contingent workforce is estimated to be between 25 and 30 per cent of all workers. Using a similar definition and drawn from the 1990 Decennial Census Public Use (Ruggles et al., 2010), Giuliano (1998) identified four types of contingent workers: the self-employed, home workers, part-time workers and workers in specialised business

services. While the PUMS data lack any firm-level information on temporary workers, seven SIC codes were selected to identify the specialised business services workers most likely to be in the contingent workforce. Her 1990 estimate was similar to that of Belous and at about 94 000 workers for the Los Angeles area. Spalter-Roth and Hartmann (1998) used Survey of Income and Program Participation (SIPP) data to count contingent workers based on three dimensions: single versus multiple jobs and/or employers, full- or part-time work and full- or part-year work. More specifically, the authors count as contingent all part-time/part-year workers and all multiple jobholders. This study yielded a contingent workforce of approximately 16 per cent of the total workforce in 1990.

The introduction of the Contingent and Alternative Employment Arrangements Supplement to the Current Population Survey (CPS), known commonly (and going forward in this paper) as the Contingent Work Supplement (CWS), allows for a more detailed assessment of these workers. The CWS was introduced in 1995 as a biennial supplement to the February CPS. It asked very specific questions about work arrangements, giving us the best estimates yet of the contingent and alternative workforce. Estimates of contingent workers based on this survey included those by Polivka (1996), Cohany (1998) and Hipple (1998). Polivka (1996) compared the estimates of contingent workers based on the CWS with Belous' estimates. She notes that 20 per cent of temps were also part-time, 15.1 per cent of the self-employed were part-time workers and 11.8 per cent of the self-employed were in the business services sector, meaning that these workers would be double-counted. The estimates based on the CWS were much lower than previous efforts, yielding contingent workforce estimates of 4.9 per cent,

or as high as 12.8 per cent under the broadest definition, in February 1995. Estimates based on 1997 data derived a similar percentage (Cohany, 1998; Hipple, 1998; Polivka, 1996).

While it is important to count accurately and characterise contingent workers nation-wide, it is also necessary for state and local policy-makers to understand the contingent workforce in their jurisdictions. While the CWS provides detailed information about contingent work arrangements, its relatively small sample size (approximately 150 000 individuals nationally) makes it impractical to use for an accurate estimation of the contingent workforce in a single state or metropolitan area. Even if we can try to count the overall number of this group, any attempt at identifying its characteristics and socio-economic impact would be likely to be misleading.

In light of these issues, we build upon these previous studies and refine the strategies of counting contingent workers in sub-national and regional jurisdictions by bridging the CWS and PUMS datasets. Using the State of Georgia as an example, we devise a typology of various work arrangements that captures different forms of employment contingency. We further describe the characteristics of the contingent workers and how they differ from traditional workers. The selection of Georgia is due to several reasons: a booming economy with strengths in the service sector and low union density suggest a sizeable and fast-growing contingent labour force. While the statistics are specific to this state, we believe that the typology and methodology developed can be readily applied to other states and metropolitan areas. We begin with a review of the literature on counting and characterising these workers over the past 30 years, followed by an explanation of our data and methodology,

our findings and our conclusions as to the policy implications of this study.

Review of Literature

The Importance of the Contingent Workforce

The economic and technological processes in today's economy—globalisation, restructuring and information technology—are transforming workplace organisation and fostering employment flexibility. Contingent workers and workers with non-standard work arrangements are a large and increasing segment of the labour force and have much policy significance on both the microeconomic and macroeconomic scales. Depending on the definition and data source adopted, they represent no less than 4 per cent and as much as over 10 per cent of the labour force (von Hippel *et al.*, 2006), with other estimates much higher yet (Belous, 1989a; Giuliano, 1998). Given the growing emphasis on workplace flexibility by both employers and workers, this number is very likely to continue to increase (Carré *et al.*, 2000; Gleason, 2006). It thus creates a need for policy innovations as current employment and social policies are largely geared towards traditional employment arrangements.

The first policy concern is that of the quality of jobs in the contingent workforce. Contingent workers usually have inadequate employment conditions and terms, loose attachment and easy dismissal by employers, lack of union protection and thus no collective bargaining power (Mehta and Theodore, 2003). While it is clear that these conditions exist for many contingent workers, the ability to track and understand this workforce is increasingly important (Ferber and Waldfogel, 1998; Kalleberg, 2000; Kalleberg *et al.*, 2000). It is

documented that nationally, the average hourly wages of workers employed by the temporary staffing industry are lower than their direct-hire counterparts in the same occupation with the only exception being nursing occupations (Peck and Theodore, 2007). Kalleberg and his colleagues have shown that, regardless of differences in the wage levels for various types of contingent work, virtually all such jobs lack the benefits largely associated with standard employment arrangements (Kalleberg, 2000; Kalleberg *et al.*, 2000). Job insecurity and lack of healthcare and other benefits can create instability and stress for workers and their families. Another issue of job quality is that of workplace safety, which may be inadequate for contingent workers. According to Mehta and Theodore (2006), temporary construction workers in Atlanta have less access to safety equipment and are exposed to heightened risks of injury.

Another policy aspect is the macroeconomic importance of this segment of the labour market. Because contingent workers tend to be the first in and first out in the business cycle, they can be an important leading indicator of the national and local labour market (Chriszt, 2002; Hotchkiss, 2004). For example, more than half a million temporary jobs, or one-fifth-of the total US workforce were lost and hundreds of small temporary staffing agencies were closed during the 2001 recession (Peck and Theodore, 2007). Evidence on the relationship between labour market cycles and self-employment, as one example, has been mixed. Dennis (1996) found little evidence that unemployment was a major factor in choosing self-employment, but others indicated that structural economic factors such as unemployment and poverty do have an impact. Oh (2008, p. 1784) found that four factors impacted self-employment: declining manufacturing employment, an increasing proportion of college graduates,

a declining unemployment rate and a rising poverty rate. Given these policy implications, the accurate and timely count as well as thorough understanding of contingent workers are deemed very important in our study of the labour market.

Defining and Counting Contingent Workers

The concept of contingent workers was first brought to our attention by Belous, as well as Polivka and Nardone in 1989, as was discussed earlier. Flexible employment is also frequently used in this discussion (Carnoy *et al.*, 1997; Peck and Theodore, 2007). Another important and related concept is that of non-standard work arrangements (NWA), also called non-standard employment arrangements, alternative employment arrangements and alternative work arrangements (Gleason, 2006; Kalleberg, 2000; Kalleberg *et al.*, 2000; Polivka, 1996; Polivka *et al.*, 2000; von Hippel *et al.*, 2006). According to the design of the CWS, this workforce is composed of eight mutually exclusive categories of workers: temporary agency workers, on-call workers, contract company workers, directly hired temporary workers, independent contractors, regular self-employed workers, regular part-time workers and regular full-time workers (Polivka, 1996; Polivka *et al.*, 2000).

There exist many controversies regarding the definition of the contingent workforce. Self-employment is one example. Prior to the use of the CWS, self-employment was used as a proxy for independent contractors, especially since owners of firms with other employees were generally counted as wage workers themselves. The CWS estimates use self-employment in this way, as well in estimating the middle and upper estimates of contingent workers (Polivka, 1996). Polivka

and Nardone point out, however, that counting the self-employed among contingent workers is problematic, distinctions should be made based on the commitment to the employer *and* the profession or occupation, and the stability of the work situation should also be taken into account (Polivka and Nardone, 1989). It is also important to understand the relationship between self-employment and independent contracting. The 1995 CWS showed that 85 per cent of independent contractors identified themselves as self-employed, while only about half of those who were self-employed (incorporated or unincorporated) said that they were independent contractors (Polivka, 1996). Bendapudi *et al.* (2003) used the CWS data to create a typology of non-standard work arrangements. For each of the four categories—contingent workers, temporary workers, on-call workers and independent contractors—the authors divided workers based on preference for non-standard employment and the firm's ability to evaluate performance (Bendapudi *et al.*, 2003). These distinctions are noteworthy, argue Bendapudi and colleagues, because the worker's preference is important if the preference is for traditional work and the ability to evaluate performance is important because it affects the bargaining power of the worker (Bendapudi *et al.*, 2003, p. 34).

A summary of the key literature on the contingent workforce, with their respective datasets, definitions, number and percentage estimates, is presented in Table 1. It is apparent that there exist substantive differences between estimates using CWS data and those using general population survey data. Part of this discrepancy is attributable to the more liberal criteria adopted by users of population survey data, where no specific information on work arrangements is readily available. The advantages, however, are the larger sample size and detailed

Table 1.Summary of key literature on contingent workers

Authors	Dataset	Definitions	Year	Estimates	
				Number (thousands)	Percentage of labour force
Belous (1989a)	1980 and 1987 Bureau of Labor Statistics Household and Establishment Surveys	*Lower* Eliminates 60 per cent of temporary workers and all business services workers	1980	Lower 24 800 Upper 28 500	23.2 26.7
		Upper Temporary, part-time, self-employed and business services workers	1987	Lower 29 100 Upper 35 100	24.3 29.3
Carnoy, Castells and Benner (1997)	1984–95 BLS, Census, and California Employment Development Department (Santa Clara County, CA only)	*Upper* Temporary, part-time, self-employed and business services workers	1984	Lower 189.3 Upper 242.7	24.7 31.9
		Lower Eliminates 60 per cent of temporary workers and all business services workers	1995	Lower 219.6 Upper 325.7	26.8 39.8
Giuliano (1998)	1990 PUMS (Los Angeles MSA Only)	Self-employed, work-at-home, part-time and business services workers	1990	94.2	24.3
Spalter-Roth and Hartmann (1998)	1987–90 SIPP	Part-time/part-year workers, and all part-time or part-year multiple job holders	1987–90	19 000 contingent	16
				16 000 'questionable' 12 000 permanent	13 10
Polivka (1996)	1995 CWS	*Estimate 1*	1995	Estimate 1 2 739	2.3
		Wage and salary workers expected to work for ≤1 year and had worked		Estimate 2 3 422 Estimate 3 6 034	2.9 5.2

(Continued)

(Continued)

Authors	Dataset	Definitions	Year	Estimates	
				Number (thousands)	*Percentage of labour force*
		for current employer for ≤1 year			
Cohany (1998)	1997 CWS	*Estimate 2*	1997	Estimate 1 2 385	2
				Estimate 2 3 096	2.6
		Adds self-employed and independent contractors ≤1 year		Estimate 3 5 574	4.6
Hipple (2001)	1999 CWS	*Estimate 3*	1999	Estimate 1 2 444	1.9
				Estimate 2 3 038	2.3
				Estimate 3 5 641	4.3
		Removes 1-year limit for tenure and expectation			1.7
Bendapudi *et al.* (2003)	2001 CWS		2001	Estimate 1 2 295	
				Estimate 2 2 963	2.2
				Estimate 3 5 369	4
von Hippel *et al.* (2006)	2005 CWS		2005	Estimate 1 2 504	1.8
				Estimate 2 3 177	2.3
				Estimate 3 5 705	4.1

demographic and socioeconomic characteristics provided by these survey data, which are necessary when it comes to drawing an accurate profile of this segment of the workforce.

Characteristics of the Contingent Workforce

There have been numerous previous studies that characterise the contingent workforce. Based on the 1997 CWS, Belman and Golden (2000) found that five industries had the largest share of contingent workers: household services, educational services, business services, construction and national/Internet security. Hipple (2001), using the 1999 CWS, got similar results, with the top five industries being private household services (16.8 per cent); educational services (11.6 per cent); business, auto and repair services (7.5 per cent); social services (7.3 per cent); and personal services (6.2 per cent). The most recent analysis was from the latest CWS in 2005; von Hippel *et al.* (2006) used only four categories of industries, the highest concentration of contingent workers being in the professional specialty (41.6 per cent) and operators, fabricators and labourers categories (27.8 per cent).

Studies show disproportionate numbers of women and minorities among contingent workers. In 2005, 48.9 per cent of contingent workers in the US were women, compared with 46.7 per cent of non-contingent workers. In terms of race/ethnicity, Blacks comprise 11.6 per cent of the contingent workforce, compared with 10.5 per cent among non-contingent workers and the numbers for Hispanics are 20.8 per cent and 12.7 per cent respectively (von Hippel *et al.*, 2006). Disaggregating these numbers for women showed some interesting changes. In 1995 and 1997, women made up 59 per cent of temporary workers, while they were only 34 per cent of independent contractors (Marler and Moen, 2005). Presser (2003), using the May 1997 CPS, looked at the related phenomenon of non-standard work shifts and again found a disproportionate share of women and minorities in this group, which is led by non-Hispanic Blacks and Hispanics. Recently, research has started to examine the representation of immigrants in various work arrangements. Using a CPS sample which followed the same respondents from March 2001 and March 2003, Waldinger *et al.* (2007) looked at attachment to the labour force and job quality for men over this period. They found that Mexican immigrants did better on attachment to the labour force from generation to generation, with second- and third-generation immigrants on par with Whites and much better than Blacks. However, Mexican immigrants still have jobs in the lower-income brackets through at least the second generation.

Looking at hourly wages and hours worked, we might expect that both are lower for contingent workers than for traditional workers. In the 2005 CWS, usual weekly earnings for contingent workers ranged from $405 to $488 depending on which estimate was used, lower than for non-contingent workers (von Hippel et al., 2006). Part-time workers usually earn less per hour than full-time workers (Tilly, 1996). In the 1999 CWS, hours worked for contingent workers ranged from an average of 27.3 to 30 hours per week, compared with 38.8 for traditional workers. Full-time contingent workers were much closer to other full-time workers (38.7–40.8 compared with 42.7), while part-timers work fewer hours than their traditional counterparts (16.8–16.9 compared with 20.6) (Kalleberg, 2000). On a related indicator, the educational level of contingent workers suggests a bifurcation that we see in some

of the other characteristics between professional and non-professional contingent work. While in 2005, contingent workers were nearly twice as likely to have less than a high-school education (15.5 per cent vs 8.6 per cent), they were also more likely to have a college degree (36.6 per cent vs 33.1 per cent) (von Hippel et al., 2006). In the case of the Silicon Valley, close to 20 per cent of flexible workers are in some technical and professional specialty occupations including computer programmers, systems analysts and engineers (Carnoy et al., 1997).

One issue that has not been adequately addressed in the literature is the impact of contingent and non-standard work arrangements on the spatial organisation of economic activities, especially location choices and commute times. Several studies have been done around related issues such as home work and telecommuting (Felstead and Jewson, 2000; Golden, 2008; Moos and Skaburskis, 2007; Redman, Snape, and Ashurst, 2009). It is found that the location pattern of home workers is not dispersed throughout their metropolitan areas as expected, but rather reinforced existing urban spatial structures in several Canadian cities (Moos and Skaburskis, 2007). Using pre-CWS data (1998), Giuliano found that, for Los Angeles, part-time workers had shorter commutes, as did self-employed workers (excluding home workers), while other full-time contingent workers had the longest commute times. The shorter commute of the self-employed is certainly associated with their greater locational flexibility and the longer commute of the full-time contingent workers is argued to reflect lower accessibility to specialised jobs, locational choices less dependent on job locations, or job uncertainty. It would be interesting to see if similar patterns are observed using recent data.

Data and Methodology
Data

The purpose of this research is to devise a method for estimating the contingent and non-standard workforce and to examine their associated demographic and socioeconomic characteristics, using the state of Georgia as an example. The obvious choice would be to use the Contingent Work Supplement (CWS) to the Current Population Survey (CPS), but it presented two important problems: sample size and lack of key variables. Since we are trying to estimate and characterise contingent workers in sub-national areas, the sample size for the CWS was too small to do much analysis. The CWS is a monthly survey of around 50 000 households, or about 150 000 individuals nation-wide, of whom only a small proportion are considered contingent workers by any definition. Based on the sample size, we could not rely on the data for a detailed look at the composition of the contingent workforce for a state. The other issue was the lack of key variables, most notably information about commuting times and workers who work at home.

Our solution is to use a combination of the detail of contingent work offered by the CWS with the larger sample sizes and rich population characteristics of the Annual Community Survey (ACS) and the decennial census Public Use Microdata Sample (Ruggles et al., 2010), in order to have a large enough sample size to work with in sub-national jurisdictions. Specifically, we use CWS to determine the industries with high contingency rates in the national sample and then use the ACS and PUMS datasets to identify workers in Georgia who work for those industries. This is a similar approach to that of Giuliano (1998), who identified a set of specialised services for contingent work, but in our case with the benefit of the detail of the CWS.

The Case of Georgia

The state of Georgia provides a good case in our examination of non-standard work arrangements for several reasons. Georgia is a rapidly growing state in terms of both population and employment. Between 1990 and 2000, Georgia ranked sixth in the nation for population growth with over 26 per cent growth in the 10-year period (US Census Bureau, 2011). Employment growth outpaced the national rate during economic expansion, fell further during recessionary periods, but overall was stronger than the US job growth rate in both the 1990-2000 period (32.5 per cent vs 19.6 per cent) and the 2000–07 period (14.0 per cent vs 8.8 per cent) (US Bureau of Economic Analysis, 2011). At the same time, Georgia's economy lost over 13 per cent of its manufacturing employment between 1990 and 2007, with retail and health care services supplanting that sector for the top two industrial sectors by employment (US Census Bureau, 2011). The industries in which Georgia specialises are of particular interest with regard to contingent labour. The strongest non-farm economic sectors for Georgia during this period relative to total US employment are management, transport and warehousing, wholesale trade, utilities and information (US Bureau of Economic Analysis, 2011). Many of these industries are considered to have large numbers of contingent workers. In addition, the lack of unionisation typical of states in the region suggests a possible relationship with a high contingent workforce presence. As a right-to-work state, Georgia has a relatively low level of union density, ranking as the sixth least unionised state in the US. The level of unionisation has decreased sharply between 1984 and 2000 as well. While union density in the US declined by 28.8 per cent, from 19.1 to 13.6 per cent, the decline in Georgia was

38.8 per cent over the same period, with only 6.3 per cent of workers in unions by the year 2000 (Hirsch *et al.*, 2001). All of these suggest that, compared with some other states, Georgia might have a more sizeable contingent workforce. Yet with the continued processes of economic restructuring and labour market liberalisation across the country (Peck et al., 2005), the same trend can be expected of other regions as well.

Industries with High Contingency Rates

Because of the more detailed data available in the CWS, we took another look at Belous' definition

> The business service industry is comprised of several major sectors, including computer and data processing services; advertising; consumer credit reporting and collection; mailing, reproduction and stenographic services; building services; and personnel services. There is also a wide range of miscellaneous business services such as management and consulting; public relations; protective services; and even research and development (Belous, 1989a, p. 37).

Based on this definition, we attempted to identify those industries that were empirically associated with contingent workers and then to cross-check those with the industries selected by Belous and Giuliano, who used more theoretical reasoning in their selections. In order to identify industries with high rates of contingent workers, we used the Contingent Worker Supplement of the Current Population Survey, with which we could identify specific attributes of contingent workers and the industries in which they were most likely to be found. The CWS was only conducted five times—in 1995, 1997, 1999, 2001 and 2005 —and it is not clear if it will

be conducted again in the near future. It was our hope to use a pooled sample of the last three surveys, but changes in the industry codes between 2001 and 2005 made it difficult to compare all three. Instead, we pooled the data from only the 1999 and 2001 surveys, and calculated the share of workers in all non-standard work arrangements (including independent contractors, temporary help workers, day labourers, on-call workers and employees of contract firms) to be 2.46 per cent of the total workforce. Then we calculated the concentration of contingent workers in each of these industries. We chose industries which had both concentrations of at least 90 per cent of the overall contingent share for all industries (or 2.2 per cent) and an average of at least 10 observations per survey year in that industry. The rationale here was to choose industries where contingent worker concentrations are on par with or higher than that for all industries.

There were two exceptions to this rule. 'Oil and gas extraction' met the criteria, but was ruled out because we chose not to include any agriculture, mining or government services. 'Miscellaneous personal services' did not meet the criteria, but was included because even though it had only a count of 19 pooled observations CWS (1999 and 2001), it had 41 workers in the 2005 survey, making the average well above 10 per year. We also reviewed the same information for the 2005 survey and, despite the different industry coding, it did seem to confirm the choices made. After these adjustments, 22 industries were selected as industries with high contingency rates as shown in Table 2. Two types of percentage value are reported in this table. The first column shows the share of contingent workers in that industry and the second column shows the share of that industry's contingent workers among all contingent workers. In construction, for

example, 4.32 per cent of construction workers are considered contingent workers and 11.76 per cent of all contingent workers are in construction.

The industries identified confirm the existing literature about contingent workers, including those chosen by Belous and Giuliano. Nearly one-third of all contingent workers, or close to 60 per cent of those in the industries selected, were working in construction, temporary help services, computer and data processing services, and hospitals and health care. The remaining industries were all in various services as well, with most in the general categories of business services and personal services. The rationale behind using a national sample to choose industries and applying these industries to a single state is the small sample size of contingent workers in each state. For example, even after pooling the data from 1999 and 2001, only 14 of the 22 industries selected had any observations for Georgia. In the end, these 22 industries selected captured 55.3 per cent of workers in non-standard work arrangements as identified in the CWS in Georgia, and 58.9 per cent nationally.

Non-standard Work Arrangements

Besides identifying workers who work for contingent industries, we also classify contingent workers based on their specific work arrangements. While there exist numerous definitions of non-standard work arrangements as discussed earlier, we used the CWS definitions to identify self-employed, part-time, and part-year workers. The following is taken from the glossary of the contingent work supplement file technical documentation (Bureau of Labor Statistics, 2005, pp. 4-6–4-8).

Self-employed—Self-employed persons are those who work for profit or fees in

Table 2. Contingent industries

SIC codes	Industry	Percentage of Industry workers who are contingent[a]	Percentage of industry contingent workers as a percentage of all contingent workers[b]
20	Landscape and horticultural services	3.37	0.75
60	All construction	4.32	11.76
410	Trucking services	3.35	2.42
441	Telephone communications	2.93	1.21
712	Real estate, including real estate-insurance offices	4.72	3.21
721	Advertising	4.45	0.36
722	Services to dwellings and other buildings	5.15	1.38
731	Personnel supply services	30.75	10.51
732	Computer and data processing services	9.09	5.70
740	Detective and protective services	15.88	2.52
741	Business services, n.e.c.	2.44	1.54
761	Private households	6.03	1.67
791	Miscellaneous personal services	4.66	0.62
800	Theatres and motion pictures	4.18	0.85
810	Miscellaneous entertainment and recreation	2.29	1.21
831	Hospitals	2.32	3.57
840	Health services, n.e.c.	5.10	3.24
871	Social services, n.e.c.	2.40	0.88
882	Engineering, architectural and surveying	5.86	1.57
890	Accounting, auditing and bookkeeping services	4.23	0.92
891	Research, development and testing services	5.50	1.15
892	Management and public relations services	6.62	1.90
Total			58.94

[a]Calculated by industry contingent workers/total industry workers.
[b]Calculated by industry contingent workers/all contingent workers.
Source: Authors' calculations using pooled CPS CWS 1999 and 2001 data for the US.

their own business, profession or trade, or operate a farm (p. 4-7)

Part-time work—Persons who work between 1 and 34 hours are designated as working 'part-time' in the current job held during the reference week. For the March supplement, a person is classified as having worked part-time during the preceding calendar year if he worked less than 35 hours per week in a majority of the weeks in which he worked during the year. Conversely, he is classified as

Table 3. Typology of contingent workers

Work arrangement	Industry	
	Contingent industries[a]	*Traditional industries*
Non-standard work arrangements[b]	1. Contingent core	2. Non-standard workers in traditional industries
Standard work arrangement	3. Standard workers in contingent industries	4. Traditional workers

[a]Industries with a high likelihood of hiring independent contractors, temporary help workers, day labourers, on-call workers and contract employees.
[b]Including the self-employed, part-time workers, part-year workers, and at-home workers.

having worked full-time if he worked 35 hours or more per week during a majority of the weeks in which he worked (p. 4-6) *Part-year work*—Part-year work is classified as less than 50 weeks' work (p. 4-6) *Year-round full-time worker*—A year-round full-time worker is one who usually worked 35 hours or more per week for 50 weeks or more during the preceding calendar year (p. 4-8)

The other category of non-standard work arrangements is workers who work from home, identified in the survey as currently employed workers with no commute time.

We thus develop a typology that classifies workers along these two dimensions: one is working for contingent industries or traditional industries, and the other is standard or non-standard work arrangements (self-employed and/or part-time/part-year and/or work from home). As described earlier, the selection of contingent industries are determined by the industry's share of five types of worker: independent contractors, temporary help workers, day labourers, on-call workers and employees of contract firms. This gives us a matrix with four employment categories as illustrated in Table 3. These are: the 'contingent core' (group 1), non-standard workers in traditional industries (group 2), standard workers in contingent industries (group 3) and traditional

workers (group 4). While group 2 and group 3 are straightforward to understand, group 1, the contingent core, denotes contingent industry workers with non-standard work arrangements and group 4, traditional workers, comprises workers with standard work arrangements who work for traditional industries.

This classification provides a richer picture of the diversity of contingent workers based on two dimensions and thus enables the counting and characterising of contingent workers in its strict and broad senses. Only workers in the contingent core can be counted as contingent workers in a strict definition while all workers in groups 1, 2 and 3 can be considered 'contingent' to various degrees. This design also provides flexibility when contingent works of various nature need to be captured. To sum, the contingent versus traditional industries are determined by each industry's tendency to hire independent contractors, temporary help workers, day labourers, on-call workers and contract firm employees. The standard versus non-standard employment is determined by the specific work arrangements— i.e. whether the worker is self-employed, part-time, part-year or works from home. While it is possible that these two criteria overlap for some workers, this typology has the advantage of capturing each worker into an exclusive category by their

Table 4.   Contingent workers in Georgia, 1990, 2000, 2005–07

	1990		2000		2005–07	
Employment category	Number	Percentage	Number	Percentage	Number	Percentage
1 Contingent core	242 945	7.3	349 327	8.4	462 187	9.8
2 NWA/traditional industries	637 562	19.1	776 075	18.8	892 011	19.0
3 Standard worker/contingent industries	558 862	16.7	778 507	18.8	949 521	20.2
4 Traditional	1 898 541	56.9	2 231 643	54.0	2 390 764	50.9
Total	3 337 910	100	4 135 552	100	4 694 483	100

Sources: Authors' calculations using Census 2000 and ACS 2005–07 data, using person weights.

Table 5.   Growth in contingent workers in Georgia, 1990–2000, 2000–2007, 1990–2007

	1990-2000		2000-07		1990-2007	
Employment category	Number	Percentage	Number	Percentage	Number	Percentage
1 Contingent core	106 382	43.8	112 860	32.3	219 242	90.2
2 NWA/traditional industries	138 513	21.7	115 936	14.9	254 449	39.9
3 Standard worker/contingent industries	219 645	39.3	171 014	22.0	390 659	69.9
4 Traditional	333 102	17.5	159 121	7.1	492 223	25.9
Total	797 642	23.9	558 931	13.5	1 356 573	40.6

Sources: Authors' calculations using Census 2000 and ACS 2005–07 data, using person weights.

dimensions of contingency. In what follows, the 2000 Census Microdata 5 per cent sample and 2005–07 combined ACS 1 per cent Microdata are used to count and characterise the contingent workforce in the state of Georgia as an example. Key demographic variables considered include age, gender, race/ethnicity and immigration status. Key economic variables include education, hourly wage, poverty status, usual hours worked per week and commute times.

Results

Counting the Contingent Workforce

Table 4 shows the distribution of all workers in Georgia across the four categories for 1990, 2000 and 2005–07, with their growth over time shown in Table 5. In 1990, 7.3 per cent of all workers were considered the contingent core, meaning that they are self-employed, part-time or worked from home for industries with high rates of contingent workers. That figure increased to nearly 10 per cent of the employed labour force for the period of 2005–07. The total number of workers in this category has grown by 219 242 workers in the past two decades, an increase of 90.2 per cent. The seven years in the 2000s have already added 112 860 workers to the contingent core, exceeding the 106 382 workers added during the 1990s. Conversely, the number of traditional workers grew by only 25.9 per cent in the same time-period, lagging behind the growth of the overall

workforce (40.6 per cent). While contingent workers in traditional industries stayed relatively stable share-wise, there was also a marked increase in standard work arrangements in contingent industries. Finally, it is important to note that the total number of contingent workers in its broadest sense adds up to almost 50 per cent of all workers in 2005–07 (top three categories combined). This speaks to the growing importance of alternative work arrangements in workers' work schedules.

One distinction important to further analysis of these data is the breakdown of workers by hours worked. Among the three contingent groups, groups 1–3, there are important differences in the number of full-time workers in each category. While the contingent core and traditional workers in contingent industries (groups 1 and 3) have slightly more than half of their workers working full-time, group 2, non-standard workers in traditional industries, had only slightly more than a quarter of workers working full-time. This especially impacts work-related variables such as income and hours worked, as can be seen in what follows.

Characterising the Contingent Workforce

Beyond an accurate count of the contingent workforce, we further conduct descriptive analysis along an array of indicators to gauge any underlying demographic and economic differences across these four types of worker. Our goal here is to present a general picture of the various demographic and economic characteristics that are associated with each group of workers based on our typology. These summary statistics provide a useful first look at any differences that exist across the contingent worker spectrum and thus serve as a starting-point for more detailed future

analysis along each dimension. Thus, no multivariate regression analysis is conducted. The indicators examined are gender, age, race/ethnicity, nativity, education, hourly wage, usual hours worked, poverty status and commute times. Statistics from two recent periods (2000, 2005–07) are presented to reveal any change over the past decade. The demographic characteristics are presented in Table 6 while the economic indicators are presented in Table 7.

Demographic Characteristics

Gender and age composition.   The gender composition of workers in each category remains relatively stable over the two study periods. While women make up around 46 per cent of the total workforce, they are heavily concentrated in group 2: non-standard work arrangement in traditional industries, with over 56 per cent in each period. This might be due to the higher percentage of female workers who work part-time. It is noted that, because of women's household responsibilities, they tend to seek employment opportunities with relatively flexible work schedules (Hanson and Pratt, 1995). Female workers, however, are less represented in the contingent industries, comprising 40 per cent of the contingent core and around 38 per cent of standard workers in contingent industries, suggesting that at least some of the contingent industries might be male-dominant.

The age distributions of workers across the four categories exhibit an uneven pattern as well. When all workers are considered in 2000, younger workers (those below 25 years old) make up about 16 per cent of the workforce and their share declined only slightly in 2005–07. Older workers (those above 50 years old)

Table 6. Demographic characteristics of workers in Georgia, by contingency type (percentages)

	2000					2005–07				
	Group 1	Group 2	Group 3	Group 4	Total	Group 1	Group 2	Group 3	Group 4	Total
Gender										
Male	59.9	43.9	61.4	53.7	53.8	59.5	43.3	62.4	52.6	53.5
Female	40.1	56.1	38.6	46.3	46.2	40.5	56.7	37.6	47.4	46.5
Age (years)										
<25	15.9	30.8	12.2	11.9	15.7	12.6	30.1	9.9	10.8	14.4
25–50	59.5	46.1	72.3	70.0	65.2	58.5	45.4	71.2	67.3	63.2
>50	24.6	23.1	15.5	18.1	19.1	28.8	24.4	18.9	21.9	22.4
Race/ethnicity										
White	66.8	62.1	56.2	60.5	60.5	66.8	62.1	56.2	60.5	60.5
Black	22.1	28.7	28.1	29.8	28.5	22.1	28.7	28.1	29.8	28.5
Hispanic	7.4	4.5	12.1	6.2	7.2	7.4	4.5	12.1	6.2	7.2
Asian	2.6	3.9	3.0	2.8	3.0	2.6	3.9	3.0	2.8	3.0
Other	1.1	0.8	0.6	0.8	0.8	1.1	0.8	0.6	0.8	0.8
Immigration status										
Native-born	90.4	91.0	87.7	91.4	90.5	86.7	89.1	81.9	88.4	87.0
Foreign-born (pre-1990 arrival)	4.3	4.5	5.3	4.4	4.6	4.9	4.4	5.1	4.5	4.7
Foreign-born (after-1990 arrival)	5.3	4.5	7.0	4.2	4.9	8.3	6.5	13.0	7.1	8.3
Education										
Less than high school	18.4	22.2	12.5	9.8	13.4	15.1	17.3	12.3	8.9	11.8
Some college	58.3	57.9	58.5	62.8	60.7	58.0	60.5	58.7	61.5	60.4
College and above	23.2	19.9	29.0	27.4	25.9	27.0	22.2	29.1	29.6	27.8

Notes: Group 1, contingent core; group 2, NWA/traditional industries; group 3, standard work/contingent industries; group 4, traditional workers.
Sources: Authors' calculation using Census 2000 and ACS 2005–07 data, using person weights.

constitute 19 per cent of all workers in 2000 and increased their share to more than 22 per cent over the past decade, an indication of the ageing of the workforce. Older workers are disproportionately represented in the contingent core, while both younger and older workers have higher than overall shares among group 2: non-standard arrangement workers in traditional industries. It might be that the various alternative work arrangements are particularly appealing to both age-groups, or that they face a greater challenge in securing full-time standard jobs in the labour market.

Race/ethnicity and immigrant status. The literature suggested that minorities and immigrants were more likely to be part of the contingent workforce, and this was largely shown by our data. Several notable distinctions and exceptions did arise, however. Not all minority groups were equally represented in non-standard work arrangements. Both Blacks and Asians were underrepresented in the contingent core and

Table 7. Economic characteristics of workers in Georgia, by contingency type

	2000				2005–07			
	Group 1	Group 2	Group 3	Group 4	Group 1	Group 2	Group 3	Group 4
Mean hourly wage ($)[a]	23.42*	17.89*	18.38*	16.52	27.83*	21.68	23.46*	21.27
Mean hours worked/week	33.84*	27.15*	44.37*	44.13	34.24*	28.23*	44.13	44.01
Poverty rate (percentage)	11.7*	16.0*	4.4*	5.4	10.7*	14.5*	4.6*	4.7
Mean commute time (minutes)	24.95*	19.22*	31.84*	26.57	21.40*	17.33*	30.91*	26.04

[a]Calculated as annual earnings/(usual hours worked per week * usual weeks worked per year); unadjusted values.
Notes: Statistics of groups 1, 2 and 3 are compared with group 4 and those with * are significant at the 0.0001 level in two-tailed t-tests of means and proportions. Group 1, contingent core; group 2, NWA/traditional industries; group 3, standard work/contingent industries; group 4, traditional workers.
Source: Authors' calculation using Census 2000 and ACS 2005–07 data, using unweighted sample.

overrepresented in group 2, workers in non-standard work arrangements in traditional industries. Hispanics were slightly underrepresented in groups 2 and 4, and were significantly overrepresented in group 3, standard workers in contingent industries. The effect in group 3 is likely to be due to the number of Hispanic workers in the construction trades. Blacks were similar to Whites in all but group 1, the contingent core, where they were underrepresented. Asians were underrepresented in group 1 and overrepresented in group 2, while being similar to all workers in groups 3 and 4. While the 2005–07 period witnessed growth of racial and ethnic minority groups in the overall workforce, the increase of representation is especially pronounced for Hispanics in contingent industries (groups 1 and 3) and for Asians in non-standard work arrangement in traditional industries (group 2).

In terms of nativity status, overall immigrants were not very different from US-born workers. One notable exception was in standard workers in contingent industries

(group 3), which has a significantly higher immigrant share than other categories. In the more recent samples, for instance, 28 per cent of immigrants were in group 3, compared with only 19 per cent of US-born workers, and 20 per cent of all workers. Linking back to the earlier findings, this is likely to be a result of the overrepresentation of Hispanics in the construction trades. A closer look at the breakdown of immigrants by arrival periods revealed more dynamics. Recent immigrants, those arriving in the previous 10–17 years (1990s), were noticeably different from their more established counterparts. Their over-representation in group 3 largely drives statistics for the whole immigrant group. The phenomenal growth of immigrants, especially Latino immigrants in the Atlanta metropolitan area since 1990, underlies these changes. It is well documented that Latino immigrants are heavily concentrated in certain job niches, especially in construction and various service sectors, termed 'brown-collar jobs' (Catanzarite, 2000). Their employment concentration in these niche jobs usually depresses their job

quality and wage levels (Liu, 2011). Their work ethics, strong ethnic networks, as well as employment constraints associated with undocumented status and lack of proper work authorisation, make them natural targets of temporary agencies (Kirschenman and Neckerman, 1991; Peck and Theodore, 2001).

Education.   The recent years between two observation periods witnessed the improvement of educational levels among all workers in Georgia, as evidenced by the shrinking of workers with less than a high school degree (from 13.4 per cent to 11.8 per cent) and the expansion of workers with a college degree or higher (from 25.9 per cent to 27.8 per cent). Within this general trend, workers with non-standard work arrangements in both contingent industries (group 1) and traditional industries (group 2) have relatively lower educational attainment with a higher share of low-skilled and a lower share of high-skilled workers. The relative concentration of low-skilled workers in non-standard work arrangements might be a result of their difficulty of securing full-time work in the labour market. At the same time, it is worth noting that high-skilled workers (those with college degree and higher) are well represented in contingent industries (groups 1 and 3), especially among those with standard work arrangements (group 3). This echoes findings from Silicon Valley and elsewhere, and demonstrates the diversity and skills bifurcation of the contingent workforce (Carnoy et al., 1997; von Hippel et al., 2006).

Economic Characteristics

Earnings and poverty. The several employment indicators together reveal some complex dynamics on the quality of contingent jobs, as shown in Table 7. Mean hourly wage is chosen as total earnings can be misleading when hours worked diverge substantially. While the hourly wage of non-standard workers in traditional industries (group 2) is either only slightly higher than (2000) or similar to (2005–07) traditional workers (group 4), workers in contingent industries (groups 1 and 3) earn significantly higher hourly wages. This is particularly true for contingent core workers (group 1) whose mean hourly wages are the highest among all groups for both periods: $23.42 for 2000 and $27.83 for 2005–07. It further confirms that not all contingent jobs are low-wage jobs and some are high-wage jobs that pay better than standard work (Kalleberg, 2000).

Although the literature suggested that contingent workers work fewer hours on average than other workers, a pattern consistent with our findings, there were some variations in our data. Most significantly, it was not the contingent core that worked the fewest hours per week (around 34 hours per week for both periods), but rather, those workers in non-standard work arrangements working in traditional industries (around 28 hours per week). It is possible that workers in traditional industries have less latitude in the number of hours they work than their counterparts in contingent industries. Standard workers in both contingent and traditional industries on average work for 44 hours per week. Thus, it is reasonable to conclude that the pay inferiority of contingent jobs noted elsewhere (for example, von Hippel et al., 2006) might be more attributable to the shorter work duration and schedule irregularity of these jobs rather than lower pay scales. Their shorter average work week might also explain the significantly higher poverty rate among non-standard workers in traditional industries (group 2) and, to a lesser extent, in the contingent core (group

1) as compared with traditional workers. Further analysis is needed to examine their compensation structure in more detail.

Commuting times. Besides the labour market implications of earnings and work organisation, the contingent segment of the workforce might also have implications for the urban spatial structure as well, given its more flexible work arrangements. Workers' looser attachment to specific work locations might impact their residential locational choices and thus commuting behaviours. In Canada, it has been found that the location pattern of home workers is not dispersing cities as expected, but rather reinforces existing urban spatial structure (Moos and Skaburskis, 2007). Previous evidence from Los Angeles indicates that part-time workers had shorter commutes, as did self-employed workers (excluding home workers), while other full-time contingent workers had the longest commute duration (Giuliano, 1998). Commuting behaviour is determined by a combination of demographic, socioeconomic and spatial factors. Past studies have found that gender, age, race/ethnicity, income, industry of employment, residential location and employment accessibility all have a significant impact on commuting mode choice and duration (Hanson and Pratt, 1995; Shen, 2000; Giuliano, 2003; Zhang, 2006). Thus, work arrangements are mediated through all these relevant factors and reflected in differences in commute times. The shorter commutes of the self-employed are likely to be associated with their greater locational flexibility and the longer commutes of the full-time contingent workers might reflect lower accessibility to specialised jobs, or job uncertainty. In the case of Georgia, both the contingent core (group 1) and other workers with non-standard work arrangements (group 2) have shorter commutes than workers with standard work arrangements. This might be due to the more flexible work pattern of these workers. Standard workers in contingent industries actually incur the longest mean commuting times of all groups: 32 minutes in 2000 and 31 minutes in 2005–07. These results are similar to results from Los Angeles and suggest the diversity of work patterns and spatial implications associated with various employed industries and specific work patterns. As the US metropolitan areas continue their spatial transformation, understanding the interaction between workplace restructuring and the geographical reconfiguration of different types of workers seems increasingly important.

Conclusion

This study offers some new insights towards the understanding of the contingent workforce. First, we have developed a typology of workers based on the two criteria of work arrangements and type of industry, with industries separated based on their tendency towards hiring contingent labour. This typology has the advantage over previous attempts by identifying workers on two dimensions of contingency and thus generating a more detailed taxonomy of workers. Secondly, this typology is then used to devise a methodology for counting and characterising these workers for sub-national-level jurisdictions. By bridging information from the small but detailed national survey of contingent workers and the large sample size of the decennial census and American Community Survey, we were able to estimate the contingent workforce in both the strict and broad senses. The ability to group each worker into an exclusive category also avoids the issue of double-counting that

existed in previous research. The state of Georgia is used as an example to illustrate its application to other states and metropolitan areas. While a booming labour market and low union density in Georgia's economy might necessarily warrant a sizeable contingent workforce, we expect that the results presented here signal a trend that will be seen in many other states. Lastly, summary statistics of demographic and economic characteristics for workers across these four groups are presented. While there exist some intergroup differences, intragroup diversity could be as substantive and calls for future research.

As a starting-point, this paper presents descriptive statistics along numerous dimensions that merit future examination. One example is the representation of different demographic groups, especially female workers, younger and older workers, minority and immigrant workers, and low-skilled workers in various contingent worker categories. Their economic mobility and social well-being are closely tied to the jobs they occupy. The specific economic and spatial implications of such workplace reorganisation call for detailed analysis as well—i.e. how a rise in the contingent workforce shapes the economic future and urban form in cities and regions. All these questions require detailed analysis of existing data and possibly the collection of new data that are better able to capture employment dynamics.

There are some policy implications of these findings. First, our research shows the continued growth of the contingent and non-standard labour force and the industries in which they tend to concentrate. Evidence from the previous recession around 2001 shows that contingent workers, especially temporary workers, are shock absorbers in volatile economic times and that the temporary staffing industry started to play an important macroeconomic intermediary role in the US labour market through economic cycles (Peck and Theodore, 2007). It would be a natural next step to gather most recent data in order to gauge the adjustment of the contingent labour force through the most recent economic recession that started in 2007. Our typology provides one way of estimating these workers. Secondly, we have shown the diversity of this group of workers, especially the division between skilled and unskilled workers, suggesting that a 'one size fits all' policy approach will not be appropriate. The mean hourly wage of contingent workers actually exceeds that of traditional workers, but they tend to have shorter working hours per week, which result in their overall higher poverty rate. While it is often noted that contingent jobs depress wages, the heterogeneous compensation structure and dynamics associated with different work arrangements require careful evaluation. There are other aspects of job quality besides earnings that research fails to address. These include availability of health insurance, fringe benefits and career advancement opportunities, among others. Thirdly, the identification of specific industries in their tendency towards the use of contingent workers is important to policy-makers and economic development professionals who try to target their efforts at expanding quality jobs in their constituencies. Last, our findings show that some disadvantaged worker groups including women, minorities, immigrants and low-skilled workers tend to be relatively concentrated in various forms of contingent jobs. Thus, the continued expansion of contingent work arrangements might exacerbate the existing economic hardship and insecurity experienced by these workers. The geographical location of the contingent job sites might create spatial accessibility issues for some workers as well. How these workers'

economic well-being is tied to the contingent work arrangements and what social policies are necessary to address widening inequality are areas that deserve more attention.

Funding statement

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Flexible Work Arrangements in Georgia: Characteristics and Trends

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**FLEXIBLE WORK ARRANGEMENTS
IN GEORGIA: CHARACTERISTICS
AND TRENDS**

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Ric Kolenda

Acknowledgments

Table of Contents

I.   Introduction

Workers with flexible work arrangements are a large and increasingly important segment of the U.S. labor force.   This paper uses a typology of the nonstandard workforce based on their work arrangement and the industries in which they concentrate to gain some understanding of this workforce in Georgia.   The typology divides the workforce into four categories: contingent core, standard workers in contingent industries, non-standard workers in traditional industries, and traditional workers.   Describing these workers by demographic and economic characteristics demonstrates much diversity across these four groups.   Possible policy implications on employment quality, cyclical employment patterns, and economic development are also discussed.

Flexible work arrangements, also known as contingent or non-standard work arrangements, are not new, but the growth in size and importance of this segment of the labor force has led to an increase in interest from researchers and policymakers alike in recent years.   The concept of the contingent workforce can be traced to the study of "peripheral workers" in the early industrial age (Adler and Adler, 2004), and the term "contingent work arrangements" was used to describe this phenomenon more recently (p. 35; Polivka and Nardone, 1989, pp. 9-10).   An alternative, more detailed definition of contingency is suggested by Polivka and Nardone, who identify contingent workers as those without "explicit or implicit contract for long-term employment (1989, p. 11)."   More specifically, these are workers who (1) lack job security, (2) have unpredictable work hours, and (3) lack access to benefits typical of traditional work arrangements (1989).

Global economic restructuring and liberalized labor markets across the world contributes to the increasing importance of contingent work arrangements.   Rising global competition, deregulated employment regimes, decline in union density, and immediate financial concerns all push profit-driven firms toward non-standard, flexible, and contingent employment (Peck, 2008; Peck, Theodore, and Ward, 2005).   In the U.S., the deindustrialization from a manufacturing based economy to a service based economy and subsequent expansion of the service sector generates demand for flexible labor (Doussard, Peck, and Theodore, 2009).   Workplace restructuring is

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further associated with the advancement in information and communication technology (ICT) that loosened workplace attachment and enabled a shift away from traditional jobs (Carnoy and Castells, 1997; Giuliano, 1998).

Counting and understanding this group of workers has important implications for public policy. Gleason suggests three reasons for the increased attention on contingent workers: the fact that their numbers are likely to increase as the labor force continues restructuring; the importance of this segment on the concept of "good jobs"; and the fact that contingent work is dominated by women, younger workers, and minorities (Gleason, 2006, pp. 1-2). Contingent employment is usually characterized by lower pay, inadequate work conditions, limited career development opportunities, short job tenure, and lack of access to unions and social protection (Mehta and Theodore, 2003). At the same time, the impact of this workforce on both employer-provided health and pension benefits and government-provided Unemployment Insurance, and on employee protection laws such as family leave, job safety, minimum wage regulations, and others, is worth noting (Wenger, 2006). In addition to the implications of contingent work for employers and workers, there is an important macroeconomic interest in a timely count of such workers as well. It is argued that contingent workers can be a "canary in a coal mine" for predicting economic conditions, acting as a leading indicator of employment trends (Muhl, 2002). Evidence from the 2001 recession showed that while temporary agency workers as a group represented only 2.5 percent of the workforce, they accounted for more than a quarter of net job losses in the labor market (Peck and Theodore, 2007).

In this report we built upon previous studies. We refined existing strategies for counting contingent workers in sub-national and regional jurisdictions by bridging three data sets: the Contingent Work Supplement (CWS), the Current Population Survey (CPS), and the Public Use Microdata Sample (PUMS). We devised a typology of various work arrangements that captures different forms of employment contingency. In addition, we trace the growth of the contingent workforce in Georgia between 1990 and 2007, and describe their demographic and socioeconomic characteristics as compared to traditional workers.

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II.   Georgia's Flexible Work Arrangements in Context

The economic and technological processes in today's economy—globalization, restructuring and information technology—are transforming workplace organization and fostering employment flexibility. Contingent workers and workers with nonstandard work arrangements are a large and increasing segment of the labor force, and have much policy significance on both the microeconomic and macroeconomic scale. Depending on the definition and data source adopted, they represent no less than 4 percent, and as high as over 10 percent of the labor force (von Hippel et al., 2006), with other estimates being much higher (Belous, 1989; Giuliano, 1998). Given the growing emphasis on workplace flexibility by both employers and workers, this number is very likely to continue to increase (Carré, Ferber, Golden, and Herzenberg, 2000; Gleason, 2006).

There have been numerous previous studies that characterize the contingent workforce. Based on the 1997 CWS, Belman and Golden (2000) found that five industries had the largest share of contingent workers: household services, educational services, business services, construction, and national/internet security. Hipple (2001), using the 1999 CWS, got similar results, with the top five industries being private household services (16.8 percent of contingent workers); educational services (11.6 percent); business, auto, and repair services (7.5 percent); social services (7.3 percent); and personal services (6.2 percent). The most recent analysis was from the latest CWS in 2005; von Hippel et al., (2006) used only four categories of industries, the highest concentration of contingent workers being in the professional specialty (41.6 percent of contingent workers) and operators, fabricators, and laborers categories (27.8 percent).

Studies show disproportionate numbers of women and minorities among contingent workers. In 2005, 48.9 percent of contingent workers were women, compared to 46.7 percent of non-contingent workers. In terms of race/ethnicity, blacks comprise 11.6 percent of the contingent workforce, compared to 10.5 percent among non-contingent workers, and the numbers for Hispanics being 20.8 percent and 12.7 percent, respectively (von Hippel et al., 2006). Disaggregating these numbers for women showed some interesting changes. In 1995 and 1997, women

made up 59 percent of temporary workers, while they were only 34 percent of independent contractors (Marler and Moen, 2005). Presser (2003), using the May 1997 CPS, looked at the related phenomenon of nonstandard work shifts, and again found a disproportionate share of women and minorities in this group, which is led by non-Hispanic blacks and Hispanics. Recently, researchers have started to examine the representation of immigrants in various work arrangements. Using a CPS sample that followed the same respondents from March 2001 to March 2003, Waldinger, Lim, and Cort (2007) looked at attachment to the labor force and job quality for men over this period. They found that Mexican immigrants did better on attachment to the labor force from generation to generation, with second- and third-generation immigrants being on par with whites, and much better than blacks. However, Mexican immigrants still have jobs in the lower income brackets through at least the second-generation.

Looking at hourly wages and hours worked, we might expect that both are lower for contingent workers than for traditional workers. In the 2005 CWS, usual weekly earnings for contingent workers ranged from $405 to $488 depending on which estimate was used, which is lower than that for non-contingent workers (von Hippel et al., 2006). Part-time workers usually earn less per hour than full-time workers (Tilly, 1996). In the 1999 CWS, average hours worked for contingent workers ranged from 27.3 to 30 hours per week, compared to 38.8 hours for traditional workers. Full-time contingent workers were much closer to other full-time workers in terms of hours worked per week (38.7 - 40.8 hours compared to 42.7 hours), while part-timers work fewer hours than their traditional counterparts (16.8- 16.9 compared to 20.6) (Kalleberg, 2000). On a related indicator, the educational level of contingent workers suggests a bifurcation that we see in some of the other characteristics, such as between professional and nonprofessional contingent work. While in 2005, contingent workers were nearly twice as likely to have less than a high-school education (15.5 percent vs. 8.6 percent), they were also more likely to have a college degree (36.6 percent vs. 33.1 percent) (von Hippel et al., 2006). In the case of the Silicon Valley, close to 20 percent of flexible workers were in some

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technical and professional specialty occupations, including computer programmers, systems analysts, engineers, among others (Carnoy and Castells, 1997).

Georgia is a rapidly growing state in terms of both population and employment. Between 1990 and 2000, Georgia ranked sixth in the nation for population growth with over 26 percent growth in the ten-year period (Perry and Mackun, 2001). Employment growth outpaced the national rate during economic expansion, fell further during recessionary periods, but overall was stronger than the U.S. job growth rate in both the 1990-2000 period (32.5 percent vs. 19.6 percent), and the 2000-2007 period (14.0 percent vs. 8.8 percent) (U.S. Bureau of Economic Analysis, 2011). At the same time, Georgia's economy lost over 13 percent of its manufacturing employment between 1990 and 2007, with retail and health care services supplanting that sector for the top two industrial sectors by employment (Ruggles et al., 2010). The industries in which Georgia specializes are of particular interest with regard to contingent labor. The strongest non-farm economic sectors for Georgia during this period (1990–2007) relative to total U.S. employment were management, transportation and warehousing, wholesale trade, utilities, and information (U.S. Bureau of Economic Analysis, 2011). Many of these industries are considered to have large numbers of contingent workers. In addition, the lack of unionization typical of states in the region suggests a possible relationship with a high contingent workforce presence. As a right-to-work state, Georgia has a relatively low level of union density, ranking as the sixth least unionized state in the U.S. The level of unionization decreased sharply between 1984 and 2000 as well. While union density in the U.S. declined by 28.8 percent, from 19.1 to 13.6 percent, the decline in Georgia was 38.8 percent over the same period, with only 6.3 percent of workers in unions by the year 2000 (Hirsch, Macpherson, and Vroman, 2001). All of these suggest that, compared to some other states, Georgia might have a more sizable contingent workforce.

III. Counting the Contingent Workforce

We classified workers along two dimensions: one is working for contingent industries or traditional industries, and the other is standard or nonstandard work arrangements (self-employed, and/or part-time/part-year, and/or work from home). The appendix describes how these two dimensions are defined specifically. The selection of contingent industries are determined by the industry's share of five types of workers: independent contractors, temporary help workers, day laborers, on-call workers, and employees of contract firms. This gives us a matrix with four employment categories as illustrated in Figure 1. These are: the "contingent core" (Group 1), nonstandard workers in traditional industries (Group 2), standard workers in contingent industries (Group 3), and traditional workers (Group 4). While Group 2 and Group 3 are straightforward to understand, Group 1, the contingent core, denotes contingent industry workers with nonstandard work arrangements, and Group 4, traditional workers, comprises workers with standard work arrangements and work for traditional industries.

FIGURE 1. TYPOLOGY OF CONTINGENT WORKERS

| | ----------------------Industry---------------------- | |
	Contingent Industries[a]	**Traditional Industries**
Non-standard Work Arrangements[b]	1. Contingent Core	2. Non-standard Workers in Traditional Industries
Standard Work Arrangement	3. Standard Workers in Contingent Industries	4. Traditional Workers

(Left side label spanning rows: **Work Arrangement**)

Note:
[a]Industries with a high likelihood of hiring independent contractors, temporary help workers, day laborers, on-call workers, and contract employees.
[b]Including the self-employed, part-time worker, part-year worker, and at-home worker.

This classification provides a richer picture of the diversity of contingent workers based on two dimensions and thus enables the counting and characterizing of contingent workers in its strict and broad senses. Only workers in contingent core can be counted as flexible workers in a strict definition, while all workers in Groups 1, 2, and 3 can be considered "flexible" to various degrees. This design also provides flexibility when contingent workers of various types need to be captured. To summarize, the contingent versus traditional industries are determined by each industry's tendency to hire independent contractors, temporary help workers, day laborers, on-call workers, and contract firm employees. The standard versus nonstandard employment is determined by the specific work arrangements, i.e., whether the worker is self-employed, part-time, part-year, or work from home. While it is possible that these two criteria overlap for some workers, this typology has the advantage of capturing each worker into an exclusive category by their dimensions of contingency.

Table 1 shows the distribution of all workers in Georgia across the four categories for periods 1990, 2000, and 2005-2007, as well as their growth over time. In 1990, 7.3 percent of all workers were considered the contingent core, meaning that they are self-employed, part-time, or worked from home for industries with high rates of contingent workers. That figure increased to nearly 10 percent of the employed labor force for the period of 2005-2007. The total number of workers in this category grew by 219,242 workers in the past two decades, an increase of 90.2 percent. The first 7 years of the 2000s added 112,860 workers to the contingent core, exceeding the 106,382 workers added during the 1990s. On the contrary, the number of traditional workers grew by only 25.9 percent in the same 7-year time period, lagging behind the growth of the overall workforce (40.6 percent). While contingent workers in traditional industries stayed relatively stable share-wise, there was also a marked increase in standard work arrangements in contingent industries. Finally, it is important to note the total number of contingent workers in its broadest sense add up to almost 50 percent of all workers in 2005-2007 (top 3 categories combined). This speaks to the growing importance of alternative work arrangements in workers' work schedules.

TABLE 1. CONTINGENT WORKERS IN GEORGIA, 1990, 2000, 2005-2007

Employment Category	----------------1990----------------		--------------2000--------------		------------2005-2007-----------	
1 Contingent Core	242,945	7.3%	349,327	8.4%	462,187	9.8%
2 NWA/Traditional Industries	637,562	19.1%	776,075	18.8%	892,011	19.0%
3 Standard Worker/Contingent Industries	558,862	16.7%	778,507	18.8%	949,521	20.2%
4 Traditional	1,898,541	56.9%	2,231,643	54.0%	2,390,764	50.9%
Total	3,337,910	100%	4,135,552	100%	4,694,483	100%
	--Growth--					
	------------1990-2000-------------		-----------2000-2007----------		------------1990-2007-----------	
1 Contingent Core	106,382	43.8%	112,860	32.3%	219,242	90.2%
2 NWA/Traditional Industries	138,513	21.7%	115,936	14.9%	254,449	39.9%
3 Standard Worker/Contingent Industries	219,645	39.3%	171,014	22.0%	390,659	69.9%
4 Traditional	333,102	17.5%	159,121	7.1%	492,223	25.9%
Total	797,642	23.9%	558,931	13.5%	1,356,573	40.6%

Source: Authors' calculation of Census 2000 and ACS 2005-2007 data using person weights.

One distinction important for further analysis of this data is the breakdown of workers by hours worked. Among Groups 1 through 3 there are important differences in the number of full-time workers. While the Contingent Core and Traditional Workers in Contingent Industries (Groups 1 and 3) have slightly more than half of their workers working full-time, Group 2, Nonstandard Workers in Traditional Industries, had only slightly more than a quarter of workers working full-time. This especially impacts work-related variables such as income and hours worked, as can be seen below.

IV.   Characterizing the Contingent Workforce

Beyond an accurate count of the contingent workforce, we conducted further descriptive analysis along an array of indicators to gauge any underlying demographic and economic differences across these four types of workers.   The indicators examined are gender, age, race/ethnicity, nativity, education, hourly wage, usual hours worked, poverty status, as well as commute times.   Statistics from two recent periods (2000, 2005-2007) are presented to reveal any change over the past decade.   The demographic characteristics are presented in Table 2 while the economic indicators are presented in Table 3.

Demographic Characteristics

Gender and Age Composition

The gender composition of workers in each category remained relatively stable over the two study periods.   While women make up around 46 percent of the total workforce, they are heavily concentrated in Group 2 (nonstandard work arrangement in traditional industries), with over 56 percent in each period.   This might be due to the higher percentage of female workers who work part-time.   It is noted that because of women's household responsibilities, they tend to seek employment opportunities with relatively flexible work schedules (Hanson and Pratt, 1995).   Female workers however are less represented in the contingent industries, comprising 40 percent of the contingent core and around 38 percent of standard workers in contingent industries, suggesting that at least some of the contingent industries might be male-dominant.

The age distributions of workers across the four categories exhibit an uneven pattern as well.   When all workers are considered in 2000, younger workers (those below 25 years old) make up about 16 percent of the workforce and their share declined only slightly in 2005-2007.   Older workers (those above 50 years of age) constitute 19 percent of all workers in 2000, and increased their share to more than 22 percent over the past decade, an indication of the aging of the workforce.   Older workers are disproportionately represented in the contingent core, while both younger and older workers have higher than overall shares among Group 2 (non-standard

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TABLE 2. DEMOGRAPHIC CHARACTERISTICS OF WORKERS BY CONTINGENCY TYPE IN GEORGIA

| | -----2000----- | | | | | -----2005-2007----- | | | | |
	Group 1	Group 2	Group 3	Group 4	Total	Group 1	Group 2	Group 3	Group 4	Total
Gender										
Male	59.9%	43.9%	61.4%	53.7%	53.8%	59.5%	43.3%	62.4%	52.6%	53.5%
Female	40.1%	56.1%	38.6%	46.3%	46.2%	40.5%	56.7%	37.6%	47.4%	46.5%
AGE										
<25	15.9%	30.8%	12.2%	11.9%	15.7%	12.6%	30.1%	9.9%	10.8%	14.4%
25-50	59.5%	46.1%	72.3%	70.0%	65.2%	58.5%	45.4%	71.2%	67.3%	63.2%
>50	24.6%	23.1%	15.5%	18.1%	19.1%	28.8%	24.4%	18.9%	21.9%	22.4%
Race/Ethnicity										
White	66.8%	62.1%	56.2%	60.5%	60.5%	66.8%	62.1%	56.2%	60.5%	60.5%
Black	22.1%	28.7%	28.1%	29.8%	28.5%	22.1%	28.7%	28.1%	29.8%	28.5%
Hispanic	7.4%	4.5%	12.1%	6.2%	7.2%	7.4%	4.5%	12.1%	6.2%	7.2%
Asian	2.6%	3.9%	3.0%	2.8%	3.0%	2.6%	3.9%	3.0%	2.8%	3.0%
Other	1.1%	0.8%	0.6%	0.8%	0.8%	1.1%	0.8%	0.6%	0.8%	0.8%
Immigration Status										
Native-Born	90.4%	91.0%	87.7%	91.4%	90.5%	86.7%	89.1%	81.9%	88.4%	87.0%
Foreign-Born (pre-1990 arrival)	4.3%	4.5%	5.3%	4.4%	4.6%	4.9%	4.4%	5.1%	4.5%	4.7%
Foreign-Born (after-1990 arrival)	5.3%	4.5%	7.0%	4.2%	4.9%	8.3%	6.5%	13.0%	7.1%	8.3%
Education										
Less than High School	18.4%	22.2%	12.5%	9.8%	13.4%	15.1%	17.3%	12.3%	8.9%	11.8%
Some College	58.3%	57.9%	58.5%	62.8%	60.7%	58.0%	60.5%	58.7%	61.5%	60.4%
College and Above	23.2%	19.9%	29.0%	27.4%	25.9%	27.0%	22.2%	29.1%	29.6%	27.8%

Source: Authors' calculation of Census 2000 and ACS 2005-2007 data using person weights.
Note: Group 1:contingent core; Group 2:NWA/traditional industries; Group 3:standard work/contingent industries; Group 4:traditional workers.

arrangement workers in traditional industries). It might be the fact that the various alternative work arrangements are particularly appealing to both age groups, or they face greater challenge in securing full-time standard jobs in the labor market.

Race/Ethnicity and Immigrant Status

The literature suggests that minorities and immigrants were more likely to be part of the contingent workforce, and this was largely shown by our data. Several notable distinctions and exceptions did arise, however. Not all minority groups were equally represented in nonstandard work arrangements. Both Blacks and Asians were underrepresented in the Contingent Core, and overrepresented in Group 2 (workers in nonstandard work arrangements in traditional industries). Hispanics were slightly underrepresented in Groups 2 and 4, and were significantly overrepresented in Group 3 (standard workers in contingent industries). The effect in Group 3 is likely due to the number of Hispanic workers in the construction trades. Blacks were similar to whites in all but Group 1, the Contingent Core, where they were underrepresented. Asians were underrepresented in Group 1 and overrepresented in Group 2, while being similar to all workers in Groups 3 and 4. While the 2005-2007 period witnessed growth of racial and ethnic minority groups in the overall workforce, the increase in representation is especially pronounced for Hispanics in contingent industries (Groups 1 and 3) and for Asians in nonstandard work arrangement in traditional industries (Group 2).

In terms of immigration status, overall the distribution of foreign-born workers was not very different from those born in the U.S. One notable exception was Standard Workers in Contingent Industries (Group 3), which has a significantly higher immigrant share than other categories. In the more recent samples, for instance, 28 percent of immigrants were in Group 3, as compared to only 19 percent of U.S.-born workers, and 20 percent of all workers. Linking back to the earlier findings, this is likely a result of the overrepresentation of Hispanics in the construction trades. A closer look at the breakdown of immigrants by arrival periods revealed more dynamics. Recent immigrants, those arriving in the previous ten to seventeen years (1990s), were noticeably different from their more established

counterparts. Their overrepresentation in Group 3 largely drives statistics for the whole immigrant group. The phenomenal growth of immigrants, especially Latino immigrants in the Atlanta metropolitan area since 1990, underlies these changes. It is well documented that Latino immigrants are heavily concentrated in certain job niches, especially in construction and various service sectors, sometimes called "brown-collar jobs" (Catanzarite, 2000). Their employment concentration in these niche jobs usually depress their job quality and wage levels (Liu, 2011). Their work ethics, strong ethnic networks, as well as employment constraints associated with undocumented status and lack of proper work authorization makes them natural targets of temporary agencies (Kirschenman and Neckerman, 1991; Peck and Theodore, 2001).

Education

The recent years between two observation periods witnessed the improvement of educational level among all workers in Georgia, as evidenced by the shrinking number of workers with less than a high school degree (from 13.4 percent to 11.8 percent) and the expansion of workers with college degree or higher (from 25.9 percent to 27.8 percent). Within this general trend, workers with nonstandard work arrangements in both contingent industries (Group 1) and traditional industries (Group 2) have relatively lower educational attainment, with higher share of low-skilled and lower share of high-skilled workers. The relative concentration of low skilled workers in nonstandard work arrangements might be a result of their difficulty of securing full-time work in the labor market. At the same time, it is worth noting that high-skilled workers (those with college degree and higher) are well represented in contingent industries (Group 1 and 3), especially among those with standard work arrangements (Group 3). This echoes findings from Silicon Valley and elsewhere, and demonstrates the diversity and skills-bifurcation of the contingent workforce (Carnoy and Castells, 1997; von Hippel et al., 2006).

Economic Characteristics

Earnings and Poverty

The several employment indicators together reveal some complex dynamics on the quality of contingent jobs, as shown in Table 3. Mean hourly wage is chosen as total earnings can be misleading when hours worked diverge substantially. While the hourly wage of non-standard workers in traditional industries (Group 2) is either only slightly higher than (2000) or similar to (2005-2007) traditional workers (Group 4), workers in contingent industries (Groups 1 and 3) earn significantly higher hourly wages. This is particularly true for contingent core workers (Group 1) whose mean hourly wages are the highest among all groups for both periods: $23.42 for 2000 and $27.83 for 2005-7. It further confirms that not all contingent jobs are low wage jobs and some are high-wage jobs that pay better than standard work (Kalleberg, 2000).

Although the literature suggests that contingent workers work less hours on average than other workers, a pattern consistent with our findings, there were some variations in our data. Most significantly, it was not the contingent core that worked the fewest hours per week (around 34 hours per week for both periods), but rather, those workers in nonstandard work arrangements working in traditional industries (around 28 hours per week). It is possible that workers in traditional industries have less latitude in the number of hours they work than their counterparts in contingent industries. Standard workers in both contingent and traditional industries on average work 44 hours per week. Thus, it is reasonable to conclude that the pay inferiority of contingent jobs as noted elsewhere (e.g. von Hippel et al., 2006) might be more attributable to the shorter work duration and schedule irregularity of these jobs rather than lower pay scales. Their shorter average work week might also explain the significantly higher poverty rate among non-standard workers in traditional industries (Group2) and to a lesser extent, contingent core (Group 1) as compared to traditional workers.

Commuting Times

Besides the labor market implications of earnings and work organization, the contingent segment of the workforce might also have implication on urban spatial

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TABLE 3. ECONOMIC CHARACTERISTICS OF WORKERS BY CONTINGENCY TYPE IN GEORGIA

| | -----2000----- | | | | | -----2005-2007----- | | | | |
	Group 1		Group 2		Group 3	Group 4	Group 1		Group 2		Group 3	Group 4
Mean Hourly Wage ($)[a]	23.42	*	17.89	*	18.38 *	16.52	27.83	*	21.68		23.46 *	21.27
Mean Hours Worked/Week	33.84	*	27.15	*	44.37 *	44.13	34.24	*	28.23	*	44.13	44.01
Poverty Rate	11.7%	*	16.0%	*	4.4% *	5.4%	10.7%	*	14.5%	*	4.6% *	4.7%
Mean Commute Time (minutes)	24.95	*	19.22	*	31.84 *	26.57	21.40	*	17.33	*	30.91 *	26.04

Source: Authors' calculation of Census 2000 and ACS 2005-7 data using unweighted sample.
Note: (a.) Calculated as annual earnings/(usual hours worked per week * usual weeks worked per year); unadjusted values.
(b.) Statistics of groups 1, 2, 3 are compared to group 4 and those with * are significant at the 0.0001 level in two-tailed t-tests of means and proportions.
(c.) Group 1:contingent core; 2:NWA/traditional industries; 3:standard work/contingent industries; 4:traditional workers.

structure as well, given its more flexible work arrangement. Workers' looser attachment to specific work locations might impact their residential locational choices and thus commuting behaviors. Commuting behavior is determined by a combination of demographic, socio-economic, and spatial factors. Past studies have found that gender, age, race/ethnicity, income, industry of employment, residential location, and employment accessibility all have significant impact on commuting mode choice and duration (Hanson and Pratt, 1995; Shen 2000; Giuliano 2003; Zhang 2006). Thus, work arrangement is mediated through all these relevant factors and reflected in differences in commute times. The shorter commutes of the self-employed is likely associated with their greater locational flexibility, and the longer commute of the full-time contingent workers might reflect lower accessibility to specialized jobs, or job uncertainty. In the case of Georgia, both the contingent core (Group 1) and other workers with non-standard work arrangement (Group 2) have shorter commutes than workers with standard work arrangements. This might be due to the more flexible work pattern of these workers. Standard workers in contingent industries actually incur the longest mean commuting times of all groups: 32 minutes in 2000 and 31 minutes in 2005-2007. These results suggest the diversity of work patterns and spatial implications associated with various employed industries and specific work patterns.

V.   Conclusion

This study offers some new insights towards the understanding of the contingent workforce. The last two decades witnessed a growth of the contingent workforce in Georgia.   While there exist some inter-group differences in demographic and economic characteristics, intra-group diversity was also substantive.

There are some policy implications of these findings. First, our research shows the continued growth of the contingent and nonstandard labor force and of the industries in which they tend to concentrate. Evidence from the previous recession around 2001 shows that contingent workers, especially temp workers, are economic shock absorbers in volatile economic times, and that the temporary staffing industry started to play an important macroeconomic intermediary role in the U.S. labor market through economic cycles (Peck and Theodore, 2007). It would be a natural next step to gather most recent data in order to gauge the adjustment of the contingent labor force through the most recent economic recession that started in 2007. Our typology provides one way of estimating these workers. Second, we have shown the diversity of this group of workers, especially the division between skilled and unskilled workers, suggesting that a "one size fits all" policy approach will not be appropriate. The mean hourly wage of contingent workers actually exceeds that of traditional workers, but they tend to have shorter working hours per week, which result in their overall higher poverty rate. While it is often noted that contingent jobs depress wages, the heterogeneous compensation structure and dynamics associated with different work arrangements require careful evaluation. There are other aspects of job quality besides earnings that research fails to address. These include questions regarding the availability to contingent workers of health insurance, fringe benefits, and career advancement opportunities, among others.   Third, the identification of specific industries in their tendency towards the use of contingent workers is important to policymakers and economic development professionals who try to target their efforts at expanding the number of quality jobs. Last, our findings show that some disadvantaged worker groups including women, minorities, immigrants, and low-skilled workers tend to be relatively concentrated in various forms of contingent jobs.   Thus, the continued expansion of contingent work arrangement might

exacerbate the existing economic hardship and insecurity experienced by these workers. The geographic location of the contingent jobsites might create spatial accessibility issues for some workers as well.

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Appendix: Defining Contingent Workers

Industries with High Contingency Rates

We identified 22 industries as having high rates of contingency workers, as shown in Table A1. Two types of percentage values are reported in this table. The first column shows the share of contingent workers in that industry, and the second column shows the share of that industry's contingent workers among all contingent workers. In construction, for example, 4.32 percent of construction workers are considered contingent workers and 11.76 percent of all contingent workers are in construction.

Nearly one-third of all contingent workers, or close to 60 percent of those in the industries selected, were working in construction, temporary help services, computer and data processing services, and hospitals and health care. The remaining industries were all in various services as well, with most in the general categories of business services and personal services. The rationale behind using a national sample to choose industries and applying these industries to a single state is the small sample size of contingent workers in each state. For example, even after pooling the data from 1999 and 2001, only 14 of the 22 industries selected had any observations for Georgia. In the end, these 22 industries selected captured 55.3 percent of workers in nonstandard work arrangements as identified in the CWS in Georgia, and 58.9 percent nationally.

Nonstandard Work Arrangements

Besides identifying workers who work for contingent industries, we also classify contingent workers based on their specific work arrangements. While there exist numerous definitions of nonstandard work arrangements as discussed earlier, we used the CWS definitions to identify self-employed, part-time, and part-year workers. The following is taken from the Glossary of the "Contingent Work Supplement File Technical Documentation" (Bureau of Labor Statistics, 2005, pp. 4-6 - 4-8).

TABLE A1. LIST OF CONTINGENT INDUSTRIES

SIC Codes	Industry	% Industry Workers Who Are Contingent[a]	% Industry Contingent Workers of All Contingent Workers[b]
20	Landscape and horticultural services	3.37%	0.75%
60	All construction	4.32%	11.76%
410	Trucking service	3.35%	2.42%
441	Telephone communications	2.93%	1.21%
712	Real estate, including real estate-insurance offices	4.72%	3.21%
721	Advertising	4.45%	0.36%
722	Services to dwellings and other buildings	5.15%	1.38%
731	Personnel supply services	30.75%	10.51%
732	Computer and data processing services	9.09%	5.70%
740	Detective and protective services	15.88%	2.52%
741	Business services, n.e.c.	2.44%	1.54%
761	Private households	6.03%	1.67%
791	Miscellaneous personal services	4.66%	0.62%
800	Theaters and motion pictures	4.18%	0.85%
810	Miscellaneous entertainment and recreation	2.29%	1.21%
831	Hospitals	2.32%	3.57%
840	Health services, n.e.c.	5.10%	3.24%
871	Social services, n.e.c.	2.40%	0.88%
882	Engineering, architectural, and surveying	5.86%	1.57%
890	Accounting, auditing, and bookkeeping services	4.23%	0.92%
891	Research, development, and testing serv	5.50%	1.15%
892	Management and public relations service	6.62%	1.90%
Total			**58.94%**

Source: Authors' calculation of pooled CPS CWS 1999 & 2001 data for the U.S.
Note: (a.) Calculated by industry contingent workers/total industry workers.
(b.) Calculated by industry contingent workers/all contingent workers.

- Self-Employed – Self-employed persons are those who work for profit or fees in their own business, profession or trade, or operate a farm. (pp. 4-7)

- Part-Time Work – Persons who work between 1 and 34 hours are designated as working "part-time" in the current job held during the reference week. For the March supplement, a person is classified as having worked part-time during the preceding calendar year if he worked less than 35 hours per week in a majority of the weeks in which he worked during the year. Conversely, he is classified as having worked full-time if he worked 35 hours or more per week during a majority of the weeks in which he worked. (pp. 4-6)

- Part-Year Work – Part-year work is classified as less than 50 weeks' work… (pp. 4-6)

- Year-Round Full-Time Worker – A year-round full-time worker is one who usually worked 35 hours or more per week for 50 weeks or more during the preceding calendar year. (pp. 4-8)

The other category of nonstandard work arrangements is workers who work from home, identified in the survey as currently employed workers with no commute time.

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Re-Creating New Orleans: Driving Development Through Creativity

Cathy Yang Liu,[1] Ric Kolenda,[1,2] Grady Fitzpatrick,[1] and Tim N. Todd[1]

Abstract

The purpose of this article is to consider the promotion of the entertainment industries as a means to economic redevelopment in post-Katrina New Orleans. A comparative study is conducted with three other cities in the Southeast: Atlanta, Georgia; Austin, Texas; and Wilmington, North Carolina. The study begins by laying a theoretical foundation for such an approach, looking at creative class and human capital theories in particular. After providing a brief background of New Orleans, the authors review current economic development strategies for the region. New Orleans' existing strength in the creative media cluster is acknowledged and alternative strategies are discussed in terms of firm-centered and people-centered approaches. The article closes with a number of specific policy implications for the city, including entertainment industry cluster development, improved quality of life for residents, and an enhanced business climate. Possible implications for other cities are also discussed.

New Orleans is a culturally diverse city with an established history in creative production and performing arts. It is the birthplace of jazz music, the site of the largest U.S. celebration of carnival, and home to a number of annual music festivals and artistic gatherings. Unfortunately, it has been the victim of natural and economic setbacks that have threatened the existence of the city as we have known it for centuries. Hurricane Katrina of 2005 was only the most recent challenge faced by this historic port city. The resulting loss in population and business, especially tourism, has made recovery difficult in spite of a national effort to aid the process. One of the biggest questions facing the city's leaders and residents is "What will the 'new' New Orleans be like?" This article provides some ideas for rebuilding in a way that might ensure a more vital and healthy economy well into the future: re-creating New Orleans through the creative entertainment industries.

In recent years, New Orleans and the state of Louisiana have started to leverage their artistic assets to attract businesses in the creative media industries, which include film, music, and digital media production. This article looks at New Orleans' capacity to grow its creative media cluster and remain competitive vis-à-vis southeastern cities that have had similar successes. We compare data from the New Orleans Metropolitan Statistical Area (MSA) to the MSAs of Atlanta, Georgia; Austin, Texas; and Wilmington, North Carolina. These three areas have established marketing plans and tax incentives to attract creative media businesses and have been successful in recruiting and maintaining creative media companies.

This article is organized as follows. First, we review the theoretical importance of creative industries generally. Next, a brief background of New Orleans is introduced, as well as the city's current creative media strategies. This is followed by detailed comparative analysis of the four cities in terms of their industrial composition, urban demography, quality of life, and cost of doing business. Last, we offer recommendations on how New Orleans can leverage its advantages and further strengthen this cluster in its economic development endeavors. Policy implications drawn can be applicable to other cities as well.

A Review of Theories

Why Are Creative Industries Important to Economic Development?

Although the definitions of creative and cultural industries are still being developed, we have chosen to confine our analysis

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to a subset in the entertainment industries: electronic media and the performing arts. Electronic media includes film, television, audio, and video game production, whereas the performing arts include theatre, music, dance, and presenting organizations. From an occupational perspective, we will look at two major groups: arts, design, entertainment, sports, and media occupations and computer occupations as defined by Bureau of Labor Statistics Standard Occupational Classification (SOC).

Several authors have noted a transition from the study of "cultural industries" to that of "creative industries," the primary difference being the addition of information technologies to the latter (Garnham, 2005; Hesmondhalgh & Pratt, 2005; Pratt, 2005). The transition began around 1997 when the Department of Culture, Media and Sport (DCMS) was created in the United Kingdom to focus on creative industries (Pratt, 2005). The DCMS defines creative industries as

> those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property. The creative industries include: advertising, film and video, architecture, music, art and antiques markets, performing arts, computer and video games, publishing, crafts, software, design, television and radio, and designer fashion. (DCMS, 2001, p. 5)

These industries differ from other industries in that they tend to focus on artistic objectives over (or at least equal to) monetary values, tend to be smaller enterprises, and tend to be organized around projects using temporary workers (Bagwell, 2008). This is particularly true for the subset of electronic media.

The entertainment industries may not seem to be the most obvious choices as economic engines for New Orleans, but they do hold the prospect for rapid export-based economic growth, high-wage employment, clean and eco-friendly conditions, and tourism promotion. The entertainment industries are among the fastest growing in the United States and the world. Even in the current economic downturn, there is a level of counter-cyclicality, or at least a lack of cyclical sensitivity, that makes this industrial cluster especially attractive. A report by Economics Research Associates (ERA) in early 2009 indicated that the film industry alone had an impact of $763 million in the state of Louisiana for the year 2007. In addition, these industries also tend to be export based; the products are largely consumed outside the region, state, and even country. Not only is the industry growing, but the jobs it creates are high-salary, high-skilled positions, which increases the consumption capacity of the local population. Creative industries are also, for the most part, clean, safe, and environmentally friendly and have the added benefit of locality promotion. This is especially true of the film industry, where

images of the region can serve to attract potential visitors and in-migrants. Finally, the entertainment industries are important because they already exist in the region. Past policies and investments have created a solid base of infrastructure and trained workers. By maintaining and strengthening the existing industries, the greater New Orleans area can capitalize on an existing competitive advantage while expanding into new areas on the margins of existing activities.

Creative Class Theory and Human Capital Theory

In 2002, the publication of *The Rise of the Creative Class* (Florida) made a major impact on the practice of economic development. Florida proposed that economic development was a result of attracting a smart, creative workforce, not the traditional approach of attracting large manufacturing employers. More specifically, the formula for success depended on the extent to which the "three Ts," technology, talent, and tolerance, were present in a community or region.

The idea that a vibrant urban place is successful due, at least in part, to its diversity, is nothing new. This was the subject of much of the work of Jane Jacobs, going back to her classic *The Death and Life of Great American Cities* and others (Jacobs, 1961, 1969, 1984). Jacobs tied form and function together in the urban space, noting that density and diversity lent vitality to the city. The work of urban sociologists like Robert Park and William Whyte, who noted the importance of "weak ties" and the freedom of urban anonymity, is another important predecessor to the theory.

Human capital theory is also an important component to the creative class theory (Glaeser, 1997, 1998; Glaeser, Kolko, & Saiz, 2001; Lucas, 1988). There are, however, two main differences between the human capital approach and that of the creative class theory: the addition of tolerance and the importance of creative occupations rather than human capital measures such as educational levels alone (Florida, 2002). The early works on human capital took a purely economic view, more or less that labor was literally a type of capital (Becker, 1964/1993; Schultz, 1961). These works did leave some unanswered questions about productivity that could not be explained by the inputs alone. Later, Lucas (1988) and Romer (1990) attempted to explain and quantify this surplus. Lucas suggested that human capital was a unique input, in addition to capital and unskilled labor, and that it had the effect of generally increasing productivity. Romer further suggested that in addition to human capital, the stock or accumulation of knowledge combined to create the externality effect of greater productivity. This stock of knowledge could be technology or innovation.

The policy implications of the creative class and human capital theories are "people-centered," focusing on locality development by way of workforce development and knowledge worker attraction strategies. The theories suggest that

investment in raising the level of human capital will create a spillover effect, increasing productivity and therefore wealth.

General Policy Tools

Using Public Policy to Promote Creative Industries

If indeed creative industries are important to economic growth, how can public policy be used to develop these industries in the local economy? Bradshaw and Blakely (1999) wrote of a "third wave" of economic development policies. The first wave emphasized direct payments to firms to attract them to the region. The second wave focused on developing existing local firms and entrepreneurship, and the third wave emphasized the importance of creating a "supportive economic development marketplace" (Bradshaw & Blakely, 1999, p. 230). The following is an overview of tools that would support such an economic development marketplace, including both firm- and people-centered approaches.

Firm-Centered Approaches to Develop the Creative Industries

The firm-centered approach is the more traditional of the two, focusing on attracting business with a combination of cash incentives, administrative assistance, and marketing strategies. What makes the creative industries unique is their industrial organization and workforce arrangement. Unlike traditional firms, these industries are more project-based than ongoing, have minimal physical plant at the firm level, and rely heavily on a large network of skilled contingent workers and subcontractors. As a result, the creation of the film office was the first step public officials usually took to coordinate with potential employers. What began as a liaison to help filmmakers with the legal and administrative aspects of the filmmaking process has become a one-stop resource for everything from scouting locations to, more recently, cash and in-kind incentives to promote the industry. This approach is now being experimented with for similar industries, such as music production and digital design. The strategies to attract firms and projects tend to cluster around four types: economic incentives, facilitation and coordination, industry-specific infrastructure projects, and marketing.

Economic incentives. Direct cash rebates for film and video production are the latest types of incentives. Recently, some states, including Louisiana and Georgia, have expanded economic incentives to related industries in audio production and digital design. Although many states offer tax credits, some of which are transferable,[1] direct rebates are generally simpler and, understandably, preferred by producers (Vock, 2008). The difference between credits and rebates is that credits are based on taxes paid, rebates on gross spending. Few states offer rebates, but others may join them if this proves to be an effective strategy in an increasingly competitive marketplace. Among the states now offering rebates are Florida, Michigan, Georgia, and Colorado (Harper, 2009), whereas Colorado has pending legislation to switch to a tax credit (Wobbekind, Horvath, Lewandowski, DiPersio, & Willoughby, 2008). Tax credits are more common, being used by a majority of states offering financial incentives to the film industry.

Sales and use tax exemptions on certain items typically associated with film production are offered by at least 25 states. The "bed tax," which offers a hotel occupancy tax exemption to production companies, is another popular incentive in at least a dozen states (Harper, 2009). New Mexico, Michigan, New Jersey, and New York all have some type of conditional loan program for film production. These loans are at below-market rate, often no interest, and sometimes contingent on profit-sharing in lieu of interest (Harper, 2009; Pierce, 2008).

Facilitation and coordination. Film offices provide a one-stop shop for the film industry. This approach has not been used to the same extent in other creative industries, though states like Georgia and Tennessee have expanded their offices to include entertainment more broadly,[2] and many of the same services are offered by governmental agencies or public–private partnerships. Fee waivers on a variety of permits and other governmental services are also widespread. The most common practice is "fee-free" filming, where the state waives permits and location fees for state-owned property, and in some cases, will even negotiate fees for non-state-owned locations as well. Maine also offers free rental of surplus property (Harper, 2009).

Industry-specific infrastructure projects. Unlike other locality development initiatives, this type of infrastructure investment is specifically designed for the creative industries that are being sought. The best example of industry-specific infrastructure is the financing and facilitation of studio space for filmmakers. Louisiana has led the way with this type of incentive since the state began an aggressive effort to build studio space for film and video production. Other states taking this approach are North Carolina, New Mexico, and Massachusetts (Harper, 2009; Wobbekind et al., 2008). This approach has been extended to digital media as well, with economic development funds in states such as Georgia offering incubation and rent subsidies for companies in that industry (Georgia.org, 2009b). Austin took it a step further and used city-owned land to build a 20-acre film studio that operates as a nonprofit. This provides a low-cost alternative to a traditional Hollywood studio (Austin Studios, 2009).

Marketing. Film offices and economic development entities often have to be proactive and get involved in location marketing. They attend trade shows to meet and develop relationships with the industry executives in order to keep their region top of mind. Communities have also produced promotional films and commercials to spur economic interest.

New Orleans used video to help spread the message that post-Katrina New Orleans was still operating and ready for business and visitors. These activities can be expensive, but with different entities working together the cost can be shared among groups. A video, for example, can be used by tourism agencies, economic developers, and individual municipalities to help convey a common state or regional message (New Orleans Online, 2009).

Another resource that many states and municipalities have created is marketing materials such as crew directories to market directly to potential producers. These sourcebooks can showcase the extensive talent base that exists in a certain state or region. In Georgia, as well as in other states, the book is in print and online and ranges from postproduction talent to equipment suppliers (Georgia.org, 2009a). This approach is easily adaptable to the other industries in this cluster as well. "Soft" marketing is another approach and involves creating "buzz" for regions to attract firms and individual workers. This "buzz" factor can be self-reinforcing, creating "cultural social agglomerations" that can improve a region's brand value (Currid & Williams, 2009).

People-Centered Approaches to Develop the Creative Industries

The creative class and human capital theories put their emphasis on attracting and developing workers in the desired industries. Locality development, which focuses on quality of life issues, and human capital investment in coordination with universities, are two such strategies used for attracting creative industry workers.

Locality development. Locality development is used to improve the quality of life of a locality to make it more attractive to workers in the desired industries. Using the creative class theory, this includes developing an active arts scene, alternative transportation options, parks and outdoor recreation, and even a vibrant nightlife, in addition to the more typical concerns such as good schools and low crime rates. The "soft" marketing idea referenced among the firm-centered approaches above can also serve to attract individual workers. Other types of locality development include more traditional business incubation and some forms of public–private partnerships.

Human capital investment and the role of universities. Investing in human capital is important for any industry, but for the creative industries it is absolutely crucial. The competitive advantage of a region depends largely on the abundance of the labor force in those industries. By training and attracting workers in these industries, firms are more likely to locate production in the area. Universities play an important role in all creative class strategies. In a case study of four regions in the United States, Smilor, O'Donnell, Stein, and Welborn

(2007) demonstrated the importance of universities in a high-tech economic development strategy.

A case study of Atlanta presents the importance of universities in improving land use development by acting as neighbor, entrepreneur, and planner (Perry et al., 2008). The role of neighbor refers to the relationship between the university and its adjacent community, the role of entrepreneur implies its activities in technology transfer and infrastructural investments, and the role of planner signifies its partnership with city and regional planners in developing the city's land use strategies. Two of the initiatives offered by Atlanta-area universities cater to the creative class and attracting human capital. Georgia Tech has an on-campus incubator geared toward technology companies. This incubator provides not only real estate but also assigned mentors, specific business advice, and best-practice sharing across start-up companies. Georgia State University is located in downtown Atlanta, which suffers from older office buildings and a lack of in-town living options. The university has worked with city officials to develop real estate for student housing and upgraded academic facilities. The university has also undergone streetscape projects to widen sidewalks and provide a more pedestrian-friendly downtown campus.

Universities also play an important role in making production facilities and equipment available and creating linkages between students and employers through job placement and internship programs. States such as Florida, Georgia, and North Carolina have established film schools at state universities to fill these roles. Austin, Texas, has also leveraged its city-owned film studio to foster professional and career development within the film industry. Through integrated educational programs, the Austin Film Society provides opportunities to learn about film and filmmaking. The film studio provides filmmaking workshops and numerous internships to help expose students and professionals to the film world (Austin Film Society, 2009).

An Overview of New Orleans
History and Urban Realities

New Orleans is a historic city located in the southeastern corner of Louisiana. The city is located on both banks of the Mississippi River Delta, though the majority of the city is located on the west bank of the Mississippi River and bordered to the north by Lake Pontchartrain. New Orleans' access to both the Mississippi River and Gulf of Mexico allowed the city to develop into a prosperous port city in the mid-1800s, whereas the area's rich farmlands facilitated the city's prosperity through its abundance of cotton, tobacco, and sugarcane farms. It was during this same period of economic prosperity that the city was able to develop its festive

atmosphere, beginning with the first official celebrations of carnival, known as Mardi Gras, in 1857 (New Orleans Guide, 2009). With multiple accesses to waterways, interstate highways, and railroads, as well as an international airport, New Orleans remains one of the largest and busiest ports in the United States. It is also the largest city in the state of Louisiana, and one of the most festive, culturally diverse, and tolerant cities in the United States.

The New Orleans–Metairie–Kenner Metropolitan Statistical Area (the New Orleans MSA) encompasses seven parishes—Jefferson, Orleans, Plaquemines, St. Bernard, St. Tammany, St. Charles, and St. John the Baptist—all centering on and around the city of New Orleans. As mentioned previously, New Orleans has a historic reputation of being a diverse city, and the city continues to have an ethnically and culturally diverse population. However, the city has traditionally been plagued with some of the highest racial segregation rates in the South, which is also associated with high rates of poverty and crime (Turner & Zedlewski, 2006). According to 2007 statistics, the New Orleans MSA poverty rate was 12% (American Community Survey, 2007). During the same year, the city reported 773 incidents (per 100,000 inhabitants) of violent crimes and 4,521 incidents (per 100,000 inhabitants) of property crimes. The high poverty and crime rates can be partially attributed to a "high prevalence of single-parent families," "weak employment opportunities," and "low family incomes" (Turner & Zedlewski, 2006, p. 7). According to this 2006 study by the Urban Land Institute, New Orleans' housing stock is relatively old, with 45% of the housing stock built before 1950, compared with about 21% of housing units nationwide (Turner & Zedlewski, 2006). In addition, in 2004, fewer than half of households in New Orleans owned their homes, compared to approximately two thirds in Louisiana and the United States as a whole (Turner & Zedlewski, 2006).

Hurricane Katrina

On August 29, 2005, Hurricane Katrina, one of the worst storms in recorded history, made landfall in southeastern Louisiana. Although Katrina affected practically all of the Gulf Coast, the city of New Orleans was particularly devastated by this storm. Winds and storm surges battered city buildings and homes. Many residents who evacuated have never returned, and the city's population and employment have only recently slowed their post-Katrina declines.

In response to this unprecedented disaster, the federal government has spent more than $51 billion in reconstruction and economic development projects in Louisiana. These funds have helped to spur what some economists are referring to as an "ongoing building boom" in the region, while also helping to keep the state's unemployment rate well below the national average (Nossiter, 2009). The influx of federal funds has also assisted the city and the region in making significant infrastructure improvements. The massive destruction caused by Hurricane Katrina, and the resulting federal funds, also led to a full-scale review of the city's policies and programs. With such overwhelming devastation, city and state officials have been forced to look at a variety of planning and redevelopment initiatives to overcome the challenges of rebuilding an entire city.

New Orleans' Creative Media Economic Development Strategy

The destruction caused by Katrina has made it more difficult for New Orleans to attract and retain creative talent, but the city has been able to use some of the funding provided for reconstruction to invest in attracting, developing, and retaining creative industry workers and firms. These funds have been used to promote and support arts and digital media industries such as music, film, and video production, as well as electronic and digital media production. The presence of these creative industries has a spillover effect on other industries, such as tourism and hospitality, while also assisting in human capital development.

Attracting and training creative talent is a goal of Greater New Orleans, Inc. (GNO, Inc.), the regional economic development agency that has designated creative media and design as one of its targeted sectors for future growth. In addition to GNO, Inc., other major economic development players in the region include Entergy Corp., a gas and utility provider that partners with local agencies to promote the region; the Mayor's Office of Recovery and Development Administration, which administers grants to redevelop New Orleans areas hard hit by Hurricane Katrina; and the Downtown Development District, a business improvement district run by an 11-member appointed board that is charged with tasks such as cultivating the arts and digital media industries in the downtown area. The city of New Orleans also has an office of film and video, which acts as one-stop shop for film professionals. Besides these regional offices, each of the 10 parishes in metro New Orleans also has an office of economic development.

It is not at all clear whether these agencies are coordinating their efforts in the interest of a well-defined regional strategy that seeks to attract and retain both people and firms. Most of the above agencies, however, do promote the state's creative media tax incentives, which have been developed to attract film, music, and digital media businesses to Louisiana. These tax incentives include the following:

1. for the film industry, a transferable tax credit of 25% for production, an additional 10% tax credit

for hiring Louisiana residents to work in locally produced films, and until January 2009, a 15% infrastructure tax credit to encourage the construction of film industry facilities;

2. for the music industry, a 25% tax credit for recording and production and a 25% tax credit on sound recording infrastructure development;

3. a 20% transferable tax credit for in-state expenditures on digital media productions, video game development, and three-dimensional animation production; and

4. for the performing arts, a 25% tax credit on base investment and construction costs and a 10% tax credit on the payroll for hiring Louisiana residents. (GNO Inc., 2009a)

Tax incentives for the film industry began in 2002 and have ignited a marked growth in motion picture–related employment in the state. Film industry jobs increased from 926 in 2001 to 3,056 in 2007, representing a compound annual growth rate of 22% (ERA, 2009). Infrastructure tax incentives, which began in 2005, have also had an impact. Twelve major infrastructure developments that were underway in 2007 had an economic impact of some $30 million and supported 257 jobs in the state (ERA, 2009).

Comparative Analysis

Using the New Orleans–Metairie–Kenner MSA as our subject area, we gathered important employment, demographic, quality of life, and cost of doing business data that would provide a comprehensive picture of the economic and social climate of the region. Comparative analysis is conducted in comparison to other U.S. cities that have an entertainment or creative media industry cluster. We focused on cities in the Southeast given the similar business climate and living costs associated with this part of the country. After researching different locations, we selected Atlanta, Georgia; Austin, Texas; and Wilmington, North Carolina. These cities all experienced growth in total population and gross metropolitan product (GMP) during recent years, as well as decline in unemployment rate. We also chose these three cities because policy-wise, they all have an established creative industry strategy in place. They are also among the top choices as locations for film and television production.

Atlanta and the State of Georgia

Atlanta experienced growth in both its population and economy between 2002 and 2007. During this time, Atlanta's population grew by 15.5%, whereas its unemployment rate fell by 0.4%. The GMP of the Atlanta MSA increased by 23.6% between 2002 and 2006. In May 2008, the state of Georgia

passed a revamped incentive package entitled the "Entertainment Industry Investment Act." From 2005 to 2007, the state of Georgia benefited from a total economic impact of entertainment productions of more than $1.17 billion and saw 637 productions in 2008 (Welcome to Georgia, 2009). Atlanta in particular is home to at least two major production facilities, Turner Broadcasting System (TBS) and Tyler Perry Studios, as well as a number of smaller facilities in film, video, and music production.

Austin and the State of Texas

The Austin–Round Rock MSA also witnessed substantive growth in its population and GMP, as well as a decline in its unemployment rate. Austin's GMP increased by 34.3% from 2002 to 2006, and its population grew by 17.7% between 2002 and 2007. During this time, the MSA's unemployment rate fell by 2.2%. It is likely that Austin's policies to promote the creative industries had a positive impact on metropolitan growth during this time period. Austin has played host to over 350 major productions over the past 20 years and has city-specific and statewide incentive programs. In 2004, the total economic impact of the entertainment industry in Austin was $360 million. In 2008, Austin topped the list for the best places to film a movie in *MovieMaker* magazine's "Top 10 Movie Cities" (Austin Filmmaker Toolkit, 2009). Texas also recently passed a bill in the 2009 state legislature to strengthen its current entertainment incentive programs (Texas, 2009).

Wilmington and the State of North Carolina

The Wilmington MSA also enjoyed healthy population and economic growth during this time. The region's population grew by 17.6%, its economy grew by 34.8%, and the unemployment rate fell by 2.5%. The city was listed Number 6 on the 2008 *MovieMaker* magazine's "Top 10 Movie Cities." Wilmington is also home to EUE Screen Gems Studios, the largest production studios east of Hollywood. With the just-completed work on its 10th sound stage, EUE has a 50-acre lot offering more than 187,000 square feet of stage space. "Stage 10" includes 37,500 square feet of sound stage and one of the largest special effects water tanks in the country (EUE Screen Gems Studios, 2009). In July 2008, the state of North Carolina extended its tax incentive program to continue to compete for productions (Wilmington Regional Film Commission Inc., 2009).

The Urban Economy

Two three-digit North America Industrial Classification System (NAICS) categories and two Occupational Employment Statistics (OES) categories are selected to best represent the

Table 1. The Urban Economy

	Atlanta	Austin	New Orleans	Wilmington
Location quotient				
NAICS 512: Motion picture and sound recording industries	0.62	1.09	1.70	0.52
NAICS 711: Performing arts and spectator sports	0.85	0.63	1.41	0.32
OES 27: Arts, design, entertainment, and media	0.91	1.28	1.08	0.45
OES 15: Computer and software programmer	1.32	2.35	0.49	0.32
Total employment				
Total labor force size	2,011,776	598,505	425,175	167,408
NAICS 512: Motion picture and sound recording industries	4,099	2,162	2,388	272
NAICS 711: Performing arts and spectator sports	6,112	1,350	2,141	136
OES 27: Arts, design, entertainment, and media	28,940	12,160	7,280	1,180
OES 15: Computer and software programmer	77,030	40,820	6,020	1,560
Percentage employment				
NAICS 512: Motion picture and sound recording industries	0.20%	0.36%	0.56%	0.16%
NAICS 711: Performing arts and spectator sports	0.30%	0.23%	0.50%	0.08%
OES 27: Arts, design, entertainment, and media	1.44%	2.03%	1.71%	0.70%
OES 15: Computer and software programmer	3.83%	6.82%	1.42%	0.93%

Source: Bureau of Labor Statistics (2007) data.
Note: NAICS = North America Industrial Classification System; OES = Occupational Employment Statistics.

industrial and occupational segments of the urban economy this article focuses on (Table 1). These are NAICS 512: Motion Picture and Sound Recording Industries and NAICS 711: Performing Arts and Spectator Sports, as well as OES 27: Arts, Design, Entertainment, and Media occupations and OES 15: Computer and Software Programmers. Although these do not represent the creative media cluster perfectly, they provide a good indication of related industries and occupations. Data are drawn from the Bureau of Labor Statistics 2007 statistics and show the total labor force size of these four urban economies, percentage employed in the specified industries and occupations, and location quotient as calculated against national average.

It is quite apparent that the New Orleans MSA has thriving entertainment industries; these industries are more concentrated in New Orleans than in the comparison cities and the nation as a whole. In 2007, this MSA has location quotients of 1.70 in Motion Picture and Sound Recording Industries and 1.41 in Performing Arts and Spectator Sports. In comparison, the Atlanta MSA has location quotients of 0.62 and 0.85, respectively; the Austin MSA has location quotients of 1.09 and 0.63, respectively; and the Wilmington MSA has location quotients of 0.52 and 0.32, respectively, in the same two industries. Further analysis of the data shows that the New Orleans MSA has 2,388 persons employed in Motion Picture and Sound Recording Industries (0.56% of the MSA's entire employment) and 2,141 workers employed in Performing Arts and Spectator Sports Industries (0.50% of the MSA's entire employment), compared with Atlanta's 4,099 (0.20%) and 6,112 (0.30%), respectively; Austin's 2,162 (0.36%) and 1,350 (0.23%), respectively; and Wilmington's 272 (0.16%) and 136 (0.08%), respectively.

Compared with the same indicators drawn from 2002 (not shown), the New Orleans MSA experienced dramatic and rapid growth in Motion Picture and Sound Recording Industries during the 5-year period. In 2002, the location quotient for this subsector of industries was 0.64 in the New Orleans MSA, and the number of employees in these industries was 1,120, or 0.23% of the MSA's total labor force. From 2002 to 2007, these industries more than doubled in concentration in the New Orleans MSA; none of the other metropolitan regions examined experienced this degree of rapid growth in these industries.

However, in terms of occupational groups, New Orleans lags behind Austin in its concentration of Arts, Design, Entertainment, and Media workers (location quotient of 1.08 compared with 1.28) and lags behind both Atlanta and Austin in its concentration of Computer and Software Programmers (location quotient of 0.49 compared with 1.32 in Atlanta and 2.35 in Austin). The mismatch between industrial and occupational data partly lies in the fact that the category of computer and software programmers encompasses more than digital media and visual arts workers; the mismatch shows the lack of creative workers in New Orleans.

The Urban Demography

The New Orleans population in 2008 is 1,043,850 residents. The Austin MSA has a slightly larger population with 1,640,100 residents. The Atlanta MSA is almost five times as large with more than 5 million residents. The Wilmington MSA has a much smaller population with 346,020 residents. A point of concern for the New Orleans region is that the projected growth rate from 2008 to 2015 is 9%. It is

Table 2. The Urban Demography

	Atlanta	Austin	New Orleans	Wilmington
Metro area demographics				
Population (2008)[a]	5,364,320	1,640,100	1,043,850	346,020
Projected population (2015)[a]	5,972,580	1,937,050	1,140,670	392,080
Population growth rate (2008-2015)[a]	11.0%	18.0%	9.0%	13.0%
Median age in years (2008)[a]	34.5	32.1	37.8	38.3
Population age 20-34 years (2008)[a]	1,139,270	417,590	189,590	7,4640
Percentage of population age 20-34 years (2008)[a]	21.0%	25.0%	18.0%	22.0%
Projected population age 20-34 years (2015)[a]	1,727,190	460,880	211,770	82,010
Projected percentage of population age 20-34 years (2015)[a]	28.9%	23.8%	18.6%	20.9%
Median household income in $ (2007)[b]	57,307	54,827	45,802	43,940
Ethnic mix				
White population (2008)	2,928,200	933,040	686,540	275,810
Percentage White population (2008)[c]	54.6%	56.9%	65.8%	79.7%
Black population (2008)	1,688,090	121,860	344,360	52,730
Percentage Black population (2008)[c]	31.5%	7.4%	33.0%	15.2%
Native American population (2008)	14,200	5,750	5,920	1,640
Percentage Native American population (2008)[c]	0.3%	0.4%	0.6%	0.5%
Asian and Pacific Islander population (2008)	245,330	79,660	34,370	3,030
Percentage Asian and Pacific Islander population (2008)[c]	4.6%	4.9%	3.3%	0.9%
Hispanic population (2008)	488,510	499,790	69,480	12,800
Percentage Hispanic population (2008)[c]	9.1%	30.5%	6.7%	3.7%
Household type[d]				
Married-couple families (2008)[d]	0.50	0.47	0.45	0.48
Other families (2008)[d]	0.18	0.15	0.21	0.15
People living alone (2008)[d]	0.26	0.29	0.29	0.30
Other nonfamily households (2008)[d]	0.06	0.09	0.05	0.08

a. 2008 Metropolitan Statistical Area Profile, Woods & Poole Economics.
b. U.S. Census Bureau (2007), American Community Survey, released in 2008.
c. 2008 Metropolitan Statistical Area Profile, Woods & Poole Economics.
d. U.S. Census Bureau (2007) American Community Survey, released in 2008.

growing at almost half the rate of Austin (18%) and lags behind Wilmington (13%) and Atlanta (11%; Table 2).

The average age of the New Orleans resident is also much higher than in Atlanta and Austin. The New Orleans average age is almost 38 years, whereas Austin is 32 and Atlanta is 34.5. Wilmington is a beach community, so its average age skews high at 38 years because of the large number of retirees in the area. New Orleans may have seen an increase in average age because of the evacuation of school-age children from New Orleans who have not yet returned to the region. We also see only a small jump in projected population growth in the 20- to 34-year-old age bracket in 2015 at 18.6%. Atlanta is especially strong in the projected growth of this age group, which is projected to comprise 28.9% of the population, and Austin and Wilmington are at 23.8% and 20.9%, respectively. Attracting and retaining the younger demographic group is key in developing a creative industry cluster within the New Orleans MSA.

New Orleans and Wilmington also have significantly lower median household incomes than Atlanta and Austin. New Orleans' median income is $45,802 and Wilmington's is $43,940. New Orleans' main industry is tourism, which often pays at a lower scale than traditional manufacturing and service sector jobs. Atlanta and Austin both have a larger employer base that pays at a higher scale. Atlanta's median household income ranks the highest at $57,307 and Austin's is $54,827.

The ethnic mix of each of these cities varies quite dramatically. Wilmington is the least diverse as almost 80% of its residents are White (15% are Black). Austin has the largest percentage of Hispanic residents (>30%). Atlanta and New Orleans have similar ethnic breakdowns. Atlanta's population is 54.6% White, 31.5% Black, and 9.1% Hispanic. New Orleans' population is similar: 65.8% White, 33.0% Black, and a slightly smaller Hispanic population of 6.7%.

New Orleans' limited population growth since Katrina may be a hindrance to economic growth. It has struggled to attract back its residents, and the data show its growth rate still lags behind that of the other MSAs. The high average age and the small percentage of the 20- to 34-year-old age group that are projected by 2015 is also of concern, as attracting the younger demographic is important for the creative industries.

Table 3. Quality of Life Indicators

	Atlanta	Austin	New Orleans	Wilmington
Poverty and crime				
Poverty rate[a]	9.0%	9.0%	12.0%	9.0%
Crime rate[b]				
Violent (per 100,000 inhabitants)	624	381	773	486
Property (per 100,000 inhabitants)	3,864	4,126	4,521	4,380
Education				
Percentage population 25+ high school graduate (2007)[c]	86.0%	86.0%	82.0%	85.8%
Percentage population 25+ bachelor's degree (2007)[c]	33.5%	38.2%	24.8%	27.7%
Number of higher education institutions[d]	52	10	17	4
Total higher education enrollment[e]	176,171	93,486	14,231	N/A
Cost of living				
Cost of living index[f] (U.S. average = 100)	96.1	93.0	98.0	101.8
Median new home price[g]	186,400	167,500	162,900	177,500
Median rent[g]	869	822	772	756
Vacant housing units[g]	11.1%	8.7%	17.6%	24.2%
Rental vacancy rate[g]	12.5%	8.5%	7.6%	12.7%
Tourism[h]				
Total visitors	37 million	18.9 million	7.1 million	N/A
Total spend by visitors	11.4 billion	3.5 billion	5 billion	0.4 billion
Hotel rooms	92,000	26,000	38,000	8,000
Climate[i]				
Average temperature (°F)	62	69	69	62
Average low temperature (°F)	52	58	62	51
Average high temperature (°F)	72	79	78	74
Annual rainfall (inches)	49.8	32.5	60.2	54.9

a. American Community Survey, released in 2008.
b. http://www.fbi.gov.
c. American Community Survey, released in 2008.
d. Atlanta Chamber of Commerce, Austin Chamber of Commerce, Greater New Orleans, Inc., Wilmington Chamber of Commerce.
e. Atlanta Regional Council for Higher Education 2008 (ARCHE).
f. ACCRA cost of living index, 2007.
g. American Community Survey, released in 2008.
h. Atlanta Convention & Visitors Bureau 2007, Austin Convention Visitors Center 2006, New Orleans Metropolitan Convention & Visitors Bureau 2007, Wilmington Convention & Visitors Bureau 2007.
i. http://www.worldclimate.com.

The low median household income can also be a concern when trying to attract new residents and improve the quality of life of current residents.

Quality of Life Indicators

New Orleans has long suffered from high poverty and crime rates, and our data show that these are issues that still plague the region. Although crime continues to be a national problem during economic uncertainty, New Orleans is still far ahead of the comparison cities with a 2007 poverty rate of 12%, compared to 9% for Atlanta, Austin, and Wilmington. The 2008 crime rates indicate that New Orleans has 773 violent crimes per 100,000 inhabitants and 4,521 property crimes per 100,000 inhabitants, the highest among the four cities (Table 3).

Education and poverty levels tend to be closely related, and we see that New Orleans is also lacking in these areas, especially compared with Atlanta and Austin. In all, 82% of New Orleans residents aged 25 years or older in 2007 were high school graduates or higher. Wilmington, Austin, and Atlanta were all at 86%. New Orleans had the smallest percentage of bachelor's degree holders, at 24.8%. Wilmington had 27.7% of its residents with a bachelor's degree and Atlanta had 33.5%. Austin was by far the highest at 38%. These issues become important in recruiting new industries, as companies need an educated and skilled workforce to operate their business. They also need a safe environment for their current employees, as well as for attracting top talent to their companies.

Regarding higher education, New Orleans boasts 17 institutions, but their total enrollment is much smaller than the comparison cities at 14,231. Atlanta has 52 higher education institutions with an enrollment of 176,171. Austin's 10 institutions have a total enrollment of 93,486. Not all the data were available for Wilmington, but it does have 4 higher education

institutions. These higher education institutions could be leveraged to tie into the workforce by providing the curriculum that matches the available jobs in the New Orleans region, which in turn will increase enrollment and tuition dollars.

The ACCRA Cost of Living Index for the United States is 100, which means that communities with higher costs of living have indices greater than 100 and vice versa. Wilmington is above that average at 101.8. New Orleans is lower at 98.0, but is still higher than Austin (93.0) and Atlanta (96.1). Some of this can be attributed to the population decline since Katrina. However, as population grows, more services and retail can be expected to come to the area, thereby reducing prices.

New Orleans' median rent of $772 is in line with Wilmington ($756), but is much lower than Atlanta ($869) and Austin ($822). This provides reasonable housing options for the 20- to 34-year-olds, who might not have the ability to purchase homes in the new stricter lending environment. However, the vacancy rate for New Orleans is low at 7.6%, so if demand increases, more rental apartments will have to be built. We did find that new housing options are much more expensive. For example, a new apartment in New Orleans geared toward the young professional is rented in the $1,600 to $3,075 range (Pristin, 2007). New Orleans' median home price of $162,900 ranks the lowest among the four, providing an opportunity for new residents who are looking to buy an affordable home.

The tourism industry in New Orleans has been getting stronger since Katrina, with a $5 billion economic impact by visitors. The number of total visitors, 7.1 million, lags behind Austin's 18.9 million and Atlanta's robust 37 million. New Orleans has an impressive 38,000 hotel rooms in the MSA compared with 8,000 in Wilmington, 26,000 in Austin and 92,000 in Atlanta.

GNO Inc. already cites its "year-round outdoor festivals" as reasons for creative industry professionals to locate in New Orleans. Festivals include Mardi Gras, which is generally held in late February; the French Quarter Festival and the New Orleans Jazz & Heritage Festival, two major music festivals held in April/May; the Essence Music Festival, a celebration of African American musical artists that is presented with the support of *Essence* magazine and held in early July; and the Voodoo Music Experience, an October music festival that features high-profile artists from all music genres as well as prominent figures from the local music scene. This culture has spawned world-renowned restaurants, musicians, and festivals that draw millions of tourists to the city. People come from all over the globe to experience the culture and attend the many festivals throughout the year. The festivals have an economic impact of tens of millions of dollars, and more important, attract the young and diverse population that is vital to the creative industry workforce (Spera, 2009). Austin has had similar success with its South by Southwest music conference (SXSW). The conference now includes a festival for the film industry and interactive

media, all during the same week (SXSW, 2009). Atlanta and Wilmington have festivals as well, but they are more regional in draw and lack the national profile of the New Orleans and Austin festivals.

All four MSAs have a nice climate with average temperatures between 62°F and 69°F and average lows between 51°F and 62°F. New Orleans and Austin have the highest average highs of 78°F and 79°F, respectively. New Orleans also gets the most rainfall per year with 60.2.

It is important for New Orleans to address the high poverty and crime rates that negatively affect the region. This should begin with improving educational resources and setting higher standards for educational achievement. Providing quality jobs to its residents, which is essential in ending the cycle of violence and poverty, is another important goal. New Orleans can also leverage the strong tourist infrastructure that is in place while striving to broaden that message beyond merely entertaining tourists. Educating visitors about the exciting business and personal opportunities that exist in the region might be a good strategy to explore. The perception that New Orleans is just a place to party could cause it to be taken less seriously as a place with high quality of life and good business climate.

Cost of Doing Business

Companies looking to relocate to a new location need commercial real estate at an affordable price. New Orleans offers the cheapest alternative for office rent at $18.50/sq. ft./year (average of Classes A and B office space; Table 4). Atlanta's average rate is $20.39, Wilmington's is $22.00 and Austin has the highest rate at $25.31. The total available office inventory in New Orleans is 15 million square feet. Atlanta more than doubles that inventory with more than 38 million square feet available. Austin falls below New Orleans with around 10 million square feet. The data were not available for Wilmington. The vacancy rate for New Orleans is also the lowest at 9.5%, which can help the market rebound, as there is not an oversupply. This also sets up more prospects for new developments, as space in the market becomes filled and vacancy rates continue to drop. The other three MSAs all have vacancy rates at or more than 13%, with Atlanta's being the highest (14.7%). The industrial and warehouse rent for New Orleans is also the lowest at $3.75. Atlanta has a similar rate of $3.90 and Wilmington is at $4.00. Austin has a much higher average warehouse rent of $6.68.

R&D and flex space rental in New Orleans is high at $12.00/sq. ft./year. Atlanta is the lowest at $9.07, with Austin at $10.09 and Wilmington at $10.50. R&D and flex space can be important in attracting creative industries. Alternative office spaces in lofts and warehouses that are in close proximity to each other can be attractive to start-up and creative companies, as it provides a campus feel to interact and share

Table 4. Cost of Doing Business Indicators

	Atlanta	Austin	New Orleans	Wilmington
Office market[a]				
Asking rent: Average class A, B, C ($/sq. ft./year)	20.39	25.31	18.50	22.00
Total available office inventory: Class A, B, C (sq. ft.)	38,367,000	10,275,000	15,000,000	N/A
Total office market vacancy rate: Class A, B, C	14.7%	13.7%	9.5%	13.1%
Industrial market[a]				
Warehouse and distribution asking rent ($/sq. ft./year)	3.90	6.68	3.75	4.00
R&D/flex asking rent ($/sq. ft./year)	9.07	10.09	12.00	10.50
Total available industrial inventory (sq. ft.)	74,052,000	9,322,000	5,000,000	N/A
Total industrial market vacancy rate	12.1%	11.8%	9.5%	10.0%
State electricity pricing				
Average retail price of industrial electricity (per kW-hr)[b]	0.07	0.09	0.08	0.06
State and local taxes				
Sales/use taxes[c]				
State	4.00%	6.25%	4.00%	4.25%
Local	4.00%	2.00%	5.00%	2.50%
State corporate income tax[d]	6.00%	None	4% > $0, 5% > $25,000, 6% > $50,000, 7% > $100,000, 8% > $200,000	6.90%
State individual income tax[e]	1% to 6% (6 brackets)	None	2% to 6% (3 brackets)	6% to 7.75% (3 brackets)
State total gasoline tax (per gallon)	0.12	0.20	0.20	0.30

a. Atlanta and Austin from CoStar National Industrial and Office Market Reports: Quarter 4, 2008; New Orleans averages from NAI 2009 Global Market Report; Wilmington from average 2009 NAI North Carolina report.
b. Energy Information Administration, August 2008.
c. http://www.taxadmin.org, 2008.
d. The Tax Foundation, state corporate income tax rates as of January 1, 2008.
e. http://www.taxfoundation.org, 2008.

ideas. Atlanta has a large industrial building inventory, more than 74 million square feet, because of having one of the biggest and busiest airports in the world. Austin is next with more than 9 million square feet in industrial buildings. New Orleans has a much smaller industrial inventory of 5 million square feet. New Orleans also has the lowest industrial vacancy rate, 9.5%.

When we turn to business-related costs and taxes, New Orleans' electricity pricing is on the higher end at $0.0787 per kilowatt hour. Austin has the highest rate at $.0880, with Wilmington at $0.0562 and Atlanta at $0.0676. New Orleans has the highest sales and use taxes, which can be a detriment when attracting companies and new residents. The state rate is 4% and the local New Orleans sales tax is 5%, for a total tax of 9%. This is much higher than Wilmington (6.75%), Atlanta (8%), and Austin (8.25%). The tax structures for the four MSA are all different. Texas is popular for having no corporate income or individual income tax. Atlanta and Georgia have a 6% corporate income tax based on gross receipts. Louisiana has a tiered corporate income tax structure ranging from 4% to 8%. North Carolina has a flat corporate income tax of 6.9%. Individual income taxes vary among the MSAs.

Georgia has six brackets ranging from 1% to 6%. Louisiana has three brackets ranging from 2% to 6%. North Carolina also has three brackets, ranging from 6% to 7.75%. Georgia has a very low gasoline tax of $0.12 per gallon. Texas and Louisiana both fall at $0.20, with North Carolina being the highest at $0.30. This tax can help pay for transportation infrastructure projects and keeps the roads and bridges updated and safe. From an economic development perspective, MSAs benefit from a business-friendly tax environment but also need to receive enough revenue to effectively run the municipality and have funds for new projects.

Recommendations for New Orleans

The data presented suggest four categories of strategies that might be employed to generate economic growth in New Orleans: focus on key industrial clusters, employ a people-centered approach to attract and retain young professionals, improve the quality of life for current and potential residents, and improve the business climate for key industries. This final section outlines some of the possible strategies available.

Industrial Cluster Strategies

Table 1 suggests two economic development focuses for New Orleans: maintaining the existing advantage in the motion picture and performing arts industries and promoting the computer and software industries. The period between 2002 and 2007 showed a marked decrease in the overall labor force, but both the absolute number and the percentage of total labor force doubled in the motion picture and sound recording industries. In addition, the location quotients for both motion pictures and performing arts in New Orleans were much higher than those for the comparison cities. This advantage can be used to maintain and grow these sectors into the future.

The computer and software industries, which include video game development, showed little change in percentage of local workforce, but given the overall growth rate in this segment of industry, there are possibilities to increase the share of employment in this area. This can be achieved by using some of the strategies listed below.

Attract and Retain Young Professionals

One difference between New Orleans and the other three cities is the number of young professionals. The percentage of population aged 20 to 34 years is several percentage points lower than that of the other cities, and that gap is predicted to grow over the next few years, although there is some anecdotal evidence of a post-Katrina influx of young people trying to aid in the city's recovery (504ward, 2009). This group is important to a thriving economy, especially one driven by the creative media industries. It is important to consider the needs of this group in terms of housing options and cultural activities. Young professionals are more likely to desire affordable housing in the city center, transportation alternatives such as public transit and bicycle paths, and a vibrant music and arts scene. All these quality of life issues should be considered.

One example of an organization committed to this goal in New Orleans is 504ward. Their stated mission is "To keep . . . the twenty- and thirty-somethings living in New Orleans and working to improve it" (504ward, 2009), which they seek to achieve by connecting young professionals to existing networks in the city and fostering economic development through programs such as business competition in conjunction with The Idea Village, a nonprofit business incubator. Another approach to retaining young people is to create linkages between students and the local creative industries. Projects such as Campus Philly and the Baltimore Collegetown Network seek to keep college students in the area by connecting them to off-campus amenities and local business networks (Baltimore Collegetown Network, 2009; Campus Philly, 2009).

Quality of Life Issues

Education. The Milken Institute's tech-based economic development strategy shows the importance of research institutions throughout the inception, growth, and fortification of an industry (DeVol, 1999), a finding further validated in the four-city case study cited earlier (Smilor et al., 2007). Among the comparison cities, Austin has the University of Texas and Atlanta has Georgia Tech and Georgia State universities. These institutions provide new talent, new ideas, and new entrepreneurial activities in a region. The greater New Orleans region is home to 11 colleges and universities, many of which already offer specialized creative media and design programs. Some existing programs include Loyola University's music industry studies program, University of New Orleans' Film School and Jazz Studies program, and a new major in digital media production at Tulane University. All these programs should be further promoted. A quality elementary and secondary education system is also important for economic growth.

Affordable housing and livable communities. Although New Orleans has many attributes that attract the creative class, there are limited housing options for them. New Orleans is a port city, and along the Mississippi River there are many abandoned and outdated warehouses. The highest ground in the city is also along the river and it is the only area that did not flood during Hurricane Katrina, making it an attractive area for real estate. Building on the success of the New Orleans Warehouse District, where warehouses were successfully converted into museums, hotels, and lofts, a similar build-out could be expanded along the river through Uptown New Orleans along Tchoupitoulas Avenue. Loft-style housing attracts the creative class, as it is an urban space. We also propose extending the streetcar line to connect all of the New Orleans cultural Meccas, that is, the French Quarter, Faubourg Marigny, and Magazine Street. Along the Mississippi River, there are also existing and proposed running, walking, and biking trails to improve accessibility and provide outdoor recreation opportunities.

The question becomes how to incentivize developers to convert these spaces. The city and state can utilize different financing tools, such as a tax allocation district or tax increment financing, as well as possible property tax abatements and other tax incentives. Toronto, Canada, has undergone a similar program to rehab warehouses into arts communities. This was done through a not-for-profit group called Artscape, which pulled together funding from the government, corporations, foundations, and individuals to buy and rehabilitate buildings in order to create affordable, sustainable, and creative communities (Artscape, 2009). A similar program could be used in New Orleans to help provide more affordable housing options in a diverse and safe environment.

We noted earlier the importance of involving institutions of higher education in the development process, and one of the roles they can take on is that of real estate developer. The development of property on and adjacent to existing campuses or the addition of new campus facilities on underused sites can be effective strategies. In addition, private real estate developers can help build out the adjacent properties into mixed-use communities where students and professionals can live, work, and play. Public–private partnerships have become essential in the current economic environment, and this becomes a win-win for all sides to develop a purposeful community based on the creative arts industry. It also allows the students to get real-world experience and hopefully transition into local full-time jobs after graduation, helping New Orleans retain its young talent. This community would also attract retailers to the area to increase the availability of goods and services for the residents and improve their quality of life and cost of living.

Business Climate

More flex/R&D space and warehouse conversion. As with housing, flexible office and research space is lacking in New Orleans relative to the other cities studied. There are excellent opportunities for warehouse conversions and brownfield development that can be used for this purpose. The Brooklyn Army Terminal is one model for such a project. New York City purchased the facility from the federal government and converted it to flex space for a variety of uses. The facility now houses firms in the arts, biotechnology, electronics, and many more industries (Brooklyn Army Terminal, 2009).

Modify targets for existing economic development incentives. We feel that the existing film incentives have been very successful in attracting film and television productions to the state of Louisiana. The Milken Institute found that tax incentives were essential in building creative industries but noted that they could be pulled back as the industries got to the "growth" and "fortification" stages (DeVol, 1999). The film industry in New Orleans may be at that point. It could be in danger of losing money by offering too many tax incentives to the film industry, as has been the case in British Columbia, Canada, where a government-led study found that the film industry was already so developed in the province that offering additional tax incentives to film industry businesses actually cost the government CD\$ 45 million in tax revenues (ERA, 2009). Instead of continuing to aggressively pursue film industry businesses, Louisiana should offer more important tax incentives for the digital media and video game industry. Although California is still considered the hub for these types of businesses, the secondary market is up for grabs, and Atlanta, Austin, and Wilmington have already started to focus on it.

Marketing these incentives to businesses will be a key component. New Orleans should align with the other state, regional, and local economic development agencies to promote Louisiana and market these incentives. New Orleans already has a large employee base of engineers, with Lockheed Martin, Northrop Grumman, and Dow Chemical employing close to 10,000 people (GNO Inc., 2009b). These are different industries, but some synergies should be explored to see what benefits might exist for new technology-driven companies. New Orleans could also better leverage its festivals in educating and promoting the region. The festivals attract an influx of creative people, which offers a unique opportunity to expose them to all aspects of the city. The tourists already provide a positive economic impact, but by creating other spin-off festivals in creative media, similar to Austin's South by Southwest, New Orleans could broaden the base of people who will attend. It is another venue to help educate people about the potential growth of New Orleans and the diverse industries it can and has already attracted.

Conclusion

New Orleans is not only one of the oldest cities in the country but also has one of the richest cultural histories of any city in the United States. This diverse culture of the region has helped to create a climate for some of the world's most popular restaurants and cuisine, numerous museums, symphony orchestras, dance troupes, and festivals. However, poverty and crime, along with one of the worst natural disasters in American history, have contributed to New Orleans' recent level of economic and population stagnation. As demonstrated in this article, recent changes in economic development policies and priorities, along with a concentration on attracting and retaining a large and diverse creative class, have brought growth back to New Orleans, and continued attention to these policy areas will continue to enhance New Orleans' return to being one of the great cities of the United States.

By comparing New Orleans' demographic and economic trends with similar southeastern MSAs, we are able to gauge the effectiveness of the policies contributing to New Orleans' creative media industries while also suggesting strategies that could potentially stimulate further economic growth in creative media industries. The comparative advantages and disadvantages of New Orleans vis-à-vis other MSAs in the region are carefully examined as well. Despite the challenges it faces, New Orleans has the makings of a vital new economy and has unique advantages among its peers in the same region. By combining firm- and people-centered approaches to the entertainment industry cluster, it could expand on current strengths and build on growing industries not well represented at this time. This can be done by focusing on attracting and retaining young talent, improving quality of life issues

for residents, and improving the business climate for the creative industries. Through these endeavors, New Orleans can surely be re-created into a better and more sustainable city.

The general economic development strategies discussed in this article can be applied to other cities as well. By using public policies to promote the growth of creative industries, cities should be able to affect their urban economic growth. Creative industries tend to create high-salary and high-skilled positions while also attracting a younger and more diverse workforce. The quality jobs provided by these industries can be a boost to any local economy, and an influx of creative industry workers in a region can also help to improve the quality of life in that area. Economic development strategies can include industrial cluster policies to improve the business climate for desired key industries and people-centered policies to attract the creative class and improve the quality of life for current and potential residents. Further research is needed that carefully examines the relative effectiveness of various incentive programs and the actual economic benefits that these creative industries bring to the regional economy.

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Declaration of Conflicting Interests

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Notes

1. Transferable credits do not require a tax liability on the part of the recipient, so that credit can be sold to a person or firm who does have a tax liability.
2. See http://www.georgia.org and http://film.tennessee.gov

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