Expectancy Data
Economic Demographers



Incremental Labor Cost Growth: 2013Q2

Wages & Salaries, Benefits & Total Compensation in the Employment Cost Index

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Table of contents

Pages

Labor Cost Forecasts 1-7

Introduction 1

Theory of Wage Rate Growth 1
Earning Capacity Determination 1
Conditions for Wage Rate Growth 2
Generally Accepted Procedures for Presenting Wage Rate Growth 3
Boundaries of Expected Wage Rate Growth 4
Summary Discussion Regarding Wage Rate Growth 4

Incremental Labor Cost Growth by Indus-try and Occupation 5
Reason and Measurement of Wage Growth Variation 5
Data 6
Results 6
Forecasting Growth Levels 8
Conclusion 8

Tables

Table Number
Table A. Results from Labor Cost Differential Growth Analysis
Table 1. All workers, Private Industry: Total Compensation
Table 2. All workers, Private Industry: Benefits
Table 3. Management, business, and financial, Private Industry: Total Compensation
Table 4. Management, business, and financial, Private Industry: Wages and Salaries
Table 5. Professional and related, Private Industry: Total Compensation
Table 6. Professional and related, Private Industry: Wages and Salaries
Table 7. Sales and related, Private Industry: Total Compensation
Table 8. Sales and related, Private Industry: Wages and Salaries
Table 9. Office and administrative support, Private Industry: Total Compensation
Table 10. Office and administrative support, Private Industry: Wages and Salaries
Table 11. Natural resources, construction, and maintenance, Private Industry: Total Compensation
Table 12. Natural resources, construction, and maintenance, Private Industry: Wages and Salaries
Table 13. Natural resources, construction, and maintenance, Private Industry: Benefits
Table 14. Installation, maintenance, and repair, Private Industry: Total Compensation
Table 15. Installation, maintenance, and repair, Private Industry: Wages and Salaries
Table 16. Production, Private Industry: Total Compensation
Table 17. Production, Private Industry: Wages and Salaries
Table 18. Transportation and material moving, Private Industry: Total Compensation
Table 19. Transportation and material moving, Private Industry: Wages and Salaries
Table 20. Service occupations, Private Industry: Total Compensation
Table 21. Service occupations, Private Industry: Wages and Salaries
Table 22. Service occupations, Private Industry: Benefits
Table 23. Goods-producing industries, Private Industry: Total Compensation
Table 24. Goods-producing industries, Private Industry: Wages and Salaries
Table 25. Goods-producing industries, Private Industry: Benefits
Table 26. Construction, Private Industry: Total Compensation
Table 27. Construction, Private Industry: Wages and Salaries
Table 28. Manufacturing, Private Industry: Total Compensation
Table 29. Manufacturing, Private Industry: Wages and Salaries
Table 30. Manufacturing, Private Industry: Benefits
Table 31. Service-providing industries, Private Industry: Total Compensation
Table 32. Service-providing industries, Private Industry: Wages and Salaries

Tables

Table Number

Table 33. Service-providing industries, Private Industry: Benefits
Table 34. Trade, transportation, and utilities, Private Industry: Total Compensation
Table 35. Trade, transportation, and utilities, Private Industry: Wages and Salaries
Table 36. Transportation and warehousing, Private Industry: Total Compensation
Table 37. Transportation and warehousing, Private Industry: Wages and Salaries
Table 38. Utilities, Private Industry: Total Compensation
Table 39. Utilities, Private Industry: Wages and Salaries
Table 40. Wholesale trade, Private Industry: Total Compensation
Table 41. Wholesale trade, Private Industry: Wages and Salaries
Table 42. Retail trade, Private Industry: Total Compensation
Table 43. Retail trade, Private Industry: Wages and Salaries
Table 44. Information, Private Industry: Total Compensation
Table 45. Information, Private Industry: Wages and Salaries
Table 46. Financial activities, Private Industry: Total Compensation
Table 47. Financial activities, Private Industry: Wages and Salaries
Table 48. Education and health services, Private Industry: Total Compensation
Table 49. Education and health services, Private Industry: Wages and Salaries
Table 50. Education services, Private Industry: Total Compensation
Table 51. Education services, Private Industry: Wages and Salaries
Table 52. Junior colleges, colleges, and universities, Private Industry: Total Compensation
Table 53. Junior colleges, colleges, and universities, Private Industry: Wages and Salaries
Table 54. Health care and social assistance, Private Industry: Total Compensation
Table 55. Health care and social assistance, Private Industry: Wages and Salaries
Table 56. Hospitals, Private Industry: Total Compensation
Table 57. Hospitals, Private Industry: Wages and Salaries
Table 58. Nursing and residential care facilities, Private Industry: Total Compensation
Table 59. Nursing and residential care facilities, Private Industry: Wages and Salaries
Table 60. Leisure and hospitality, Private Industry: Total Compensation
Table 61. Leisure and hospitality, Private Industry: Wages and Salaries
Table 62. Accommodations and food service, Private Industry: Total Compensation
Table 63. Accommodations and food service, Private Industry: Wages and Salaries
Table 64. All union workers, Private Industry: Total Compensation
Table 65. All union workers, Private Industry: Wages and Salaries
Table 66. All union workers, Private Industry: Benefits
Table 67. All workers, State & Local Govt: Total Compensation
Table 68. All workers, State & Local Govt: Wages and Salaries
Table 69. All workers, State & Local Govt: Benefits
Table 70. Professional and related, State & Local Govt: Total Compensation
Table 71. Professional and related, State & Local Govt: Wages and Salaries
Table 72. Office and administrative support, State & Local Govt: Total Compensation
Table 73. Office and administrative support, State & Local Govt: Wages and Salaries
Table 74. Service occupations, State & Local Govt: Total Compensation
Table 75. Service occupations, State & Local Govt: Wages and Salaries
Table 76. Education services, State & Local Govt: Total Compensation
Table 77. Education services, State & Local Govt: Wages and Salaries
Table 78. Schools, State & Local Govt: Total Compensation
Table 79. Schools, State & Local Govt: Wages and Salaries
Table 80. Elementary and secondary schools, State & Local Govt: Total Compensation
Table 81. Elementary and secondary schools, State & Local Govt: Wages and Salaries
Table 82. Health care and social assistance, State & Local Govt: Total Compensation
Table 83. Health care and social assistance, State & Local Govt: Wages and Salaries
Table 84. Hospitals, State & Local Govt: Total Compensation
Table 85. Hospitals, State & Local Govt: Wages and Salaries

Tables

Table Number

Table 86. Public administration, State & Local Govt: Total Compensation
Table 87. Public administration, State & Local Govt: Wages and Salaries

Investigators and Data Availability

Investigators and Data Availability ..... Inside back cover

Incremental Labor Cost Growth

Introduction

In order to accurately forecast an individual's earning capacity, an accurate forecast of the future growth in the compensation paid to workers is essential. This report provides the theory, methodology, and results of the Expectancy Data forecasting system for producing labor cost forecasts by industry and occupation. The first section of the report provides the theoretical structure employed to produce wage rate growth. The next section presents the methodology we employ to produce forecasts. We then present the data utilized and our results.

Theory of Wage Rate Growth

The meaning of earning capacity is: utilizing his or her abilities, what amount of money can a person reasonably expect to earn working at a job. At the heart of earning capacity determination is the person's sustainable wage rate.[1]

Earning Capacity Determination

Earning capacity determination within general economic theory begins with the equilibrium wage rate conditions of a profit-maximizing firm.[2] Within those equilibrium conditions, economists know that marginal revenue product determines the wage rate. The factors that determine an individual's marginal revenue product include price levels, relative prices, human capital, innate abilities, and technology. With the knowledge of the origin of marginal revenue product, economists can make accurate forecasts of earning capacity.

From profit maximization economic conditions, economists know that, in equilibrium, the wage rate received, W, is equal to the marginal revenue product of individual labor, MRP_L. We write this relationship as

(1) $W = MRP_L$,

where MRP_L is defined as $\partial R / \partial L$, or the partial derivative of R (the firm's revenue) with respect to L (labor input) when all other variables in the specified profit maximizing economic function are held constant. Economists use the word marginal to equate the first derivative of a function with respect to one of its independent variables. So in the case of MRP_L, economists are interested in the change in firm's revenue associated with a change in the amount of labor employed with all other production factors (e.g., capital, land) remaining the same.

When studying profit maximization, an important economic concept is marginal revenue, MR, or the change in firm's revenue associated with a change in the firm's output, P. Using the established notation,

(2) $MR = \partial R / \partial P$.

With mathematical manipulation, we can incorporate equation (2) into the right-hand-side of equation (1) as:

(3) $MRP_L = \partial R / \partial L = \partial R / \partial P \times \partial P / \partial L = MR \times \partial P / \partial L$

.

The condition $\partial P / \partial L$ represents the marginal change in output with a change in the amount of labor employed, or simply, the marginal product of labor, MP_L. We can now rewrite equation (3) as:

(4) $MRP_L = MR \times MP_L$.

Substituting the right-hand-side of equation (4) into equation (1), economists accept that the product of marginal revenue and the marginal product of labor is the determinant of the wage rate:

(5) $W = MR \times MP_L$.

---

[1] The demand market for labor determines the units of earning capacity (e.g., a job giving a certain level of earning capacity might be constrained in the market to 8 hours per day for five days per week for 52 weeks per year). Due to market, mental, and physical constraints, a person may possess one or more levels of earning capacity. For example, within the labor market, a person might weekly supply H_1 hours of labor at C_1 level of earning capacity and also provide H_2 hours at C_2 level of earning capacity where $C_1 > C_2$. A typical situation for this example is that a person works a strenuous full-time day job for H_1 at C_1 and a light duty part-time night job for H_2 at C_2; it is unreasonable that the person could work ($H_1 + H_2$) hours per week at C_1 level of earning capacity due to limiting physical and mental constraints.

[2] The wage rate in this context is the total unit cost of labor that includes money wages to the worker, fringe benefits, payroll taxes, workers and unemployment insurance, etc. The mix of money wages and other labor costs within the total unit cost of labor is variable under the theories of wage-rate determination. The 'unit' in "total unit cost of labor" is also variable and dependent upon the specification of the profit maximization function. In most economic wage rate determination problems, economists disaggregate their empirical analysis of money wages and fringe benefits.

Equation (5) summarizes the economic theory that the wage rate available to an individual (i.e., earning capacity) from a profit-maximizing firm in equilibrium is equal to the product of marginal revenue and the marginal product of the individual's labor. Although there may be firm-specific exceptions to this relationship (created by things such as monopsony in the market for labor, efficiency wages, or that wage rates may vary randomly around MRP_L due to mistakes), economists generally accept that the transferability of assets ensures that firms eventually return to the position of relating wages to marginal revenue product of labor. Additionally, in the short-term, institutional forces may affect the model's assumptions of a profit maximizing firm and a competitive labor market; however, economists generally accept that institutions over the long-term are unable to significantly separate the relationship of the wage rate to the marginal revenue product of labor.

The firm's revenue, R, is equal to the product of its output, P, and the price of its output, y:

(6) $R = P \times y$.

Marginal revenue is defined as

(7) $MR = {\partial R}/{\partial P} = y + {\partial y}/{\partial P} \times P$

and changes in marginal revenue will occur only when the price, y, changes. The price change will be the result of either a relative price change or a change in the price level (inflation). The laborer has no control over the market price of the product he or she produces (i.e., a laborer does not influence price inflation or, presumably, relative prices). Therefore, the wage rate that a laborer receives has determining conditions through a firm's marginal revenue that are exogenous to the quality or kind of work supplied by the laborer to the firm.

The marginal product of labor, how much the firm's output changes as it changes its amount of labor input, depends upon the specific characteristics of the labor supplied by the individual to the firm. Economists analyze the individual's productivity from three viewpoints: individual innate ability, individual level of human capital, and the existing technological conditions within the economy. Hence, the individual's earning capacity is dependent upon productivity factors unique to themselves (innate ability and human capital) and productivity factors that apply to all labor in the economy (existing technology).

Conditions for Wage Rate Growth

When studying the changes in the wage rate (or earning capacity) over time, economists frame their models within the total differential of equation (5) with respect to time, t, as follows:

(8) $$\frac{\mathrm{d}W}{\mathrm{d}t} = MP_L \times \frac{\mathrm{d}MR}{\mathrm{d}t} + MR \times \frac{\mathrm{d}MP_L}{\mathrm{d}t}.$$

Changes in MR over time are a function of changes in relative price levels and changes in the price level (inflation). The relationship of the changes in the price of the firm's products to changes in marginal revenue, according to equation (6), is such that a particular percentage change in the price of the product, other things equal, will result in that percentage change in marginal revenue. Then according to equation (8), that percentage change in marginal revenue will translate into that percentage change in the wage rate. For example, a 5 percent increase in the price level will result in a 5 percent increase in the wage rate, other things equal.

The changes in an individual's MP_L over time will be a function of changes in innate abilities, human capital, and technological conditions. Innate abilities refer to the individual's inborn mental and physical capacities; innate abilities are subject to diminishment causing decreasing rates of marginal productivity growth (e.g., advancing age with reduced physical or mental capacities could deter marginal productivity growth, or a disability could immediately lower innate abilities).

Human capital, in contrast to innate abilities, refers to skills and positions acquired by individual throughout life. Economic theory shows that, in general, human capital is acquired early in life leading to a concave behavior of wage rates over the life cycle. The generally accepted Ben-Porath model shows the derivation of the concave life-cycle earnings pattern. We summarize the Ben-Porath model as follows: let

(9) $E_t = wH_t$

where,

E_t is earning capacity,
w is the wage rate per unit of human capital stock, and
H_t is the number of units of human capital processed in time t.

The behavior of E_t over time will depend on the behavior of H_t over time. Increasing C_t involves a

cost. Adding to human capital requires an investment that requires the use of some portion of the existing human capital stock. The human capital stock used for investment could otherwise be used for current earnings. And, there is a benefit to increasing H_t. The benefit is the increase in lifetime earning capacity. By equating the marginal cost and marginal benefit of increasing the human capital stock, the model shows that the investments will be greater at initial time periods and diminish as the individual ages. This leads directly to the concavity of wage rates. If the model allows for the depreciation of human capital, E_t may decline at the latter stages of the earning cycle.

As an example of the life cycle earning pattern, consider a male high school graduate. His real wage rate increases (wage rate growth unrelated to product price changes) would be expected to grow rapidly at the beginning of his work-life as he is increasing his human capital through on-the-job training. This on-the-job training increases his productivity (MP_L) and thus makes him more valuable to his employer and his wage rate increase accordingly. At some point the increases in human capital resulting from on-the-job training would begin to level off as he learns what there is to learn and is less willing to devote time to increasing human capital as the time period for payoff decreases. There may be a related decrease in earnings toward the end of his worklife due to a reduction in innate abilities such as stamina and strength or depreciation in human capital acquired earlier in life.

Technological change can also result in changes in the individual's MP_L and thereby the relative wage rate (or earning capacity). Labor-using technological progress implies that at a constant capital-labor ratio, the marginal rate of technical substitution of capital for labor increases. This would result in an increasing relative wage rate and an increase in labor's share of output. This result follows from the standard model. By definition, economists recognize technology conditions as

$$(10) \qquad MRTS = \frac{MP_L}{MP_K}$$

where,

$MRTS$ is the marginal rate of technical substitution (capital for labor),

MP_L is the marginal productivity of labor,

and,

MP_K is the marginal productivity of capital.

An equilibrium condition for profit maximization is:

$$(11) \qquad \frac{MP_L}{MP_K} = \frac{w}{k}$$

where k is the per unit price of capital. A labor-using technological change is an increase in technology such that at a constant capital-labor input ratio, $\frac{K}{L}$, $\frac{MP_L}{MP_K}$ increases. Thus, if there is a labor-using technological change, w increases relative to k.

Generally Accepted Procedures for Presenting Expected Wage Rate Growth

It is generally accepted that the economic theories contained in equations (1)-(11) form the foundation of expected wage rate growth theory. Economists may use a variety of methodologies to estimate the principle components of wage rate growth, but they may not reject the theoretical basis of equations (1)-(11) and still be in conformity with generally accepted economic principles.

When estimating expected wage rate growth, we see from equations (5) and (8) that an economist can separate his or her analysis of the reasons wage rates change into marginal revenue considerations and marginal product considerations. When an economist includes changes in the price level (inflation) as one of the reasons for wage rate changes, he or she is said to be studying "nominal rates" of wage rate growth. When an economist does not include changes in price levels as one of the reasons for wage rate changes and focuses only on relative prices and marginal product, he or she is said to be studying "real rates" of wage rate growth.

Nominal rates of wage rate growth estimate future-dollar levels of wage rates while real rates of wage rate growth estimate constant-dollar levels of wage rates. Economists accept nominal and real rates of wage rate growth as long as the economist consistently expresses all terms within his or her forecast as nominal or real. For example, an economist may use future nominal expected wage rate growth to calculate a forecast of future-dollar levels of earnings and then discount to present value using a future expected nominal rates of interest. Or, an economist may use future real expected wage rate growth to calculate a forecast of current-dollar levels of future earnings and then discount to present value using a future expected real rate of interest. The economist cannot use combinations of nominal

growth/real interest nor real growth/nominal interest.

When working in "real terms," the economist estimates future wage rates absent price inflation. Whatever the exogenous level of price inflation may be during the base year, t_0, and any other year, t_0+n, in the future, the economist's real dollar forecast translates to nominal money wage rates in year t_0+n that are $\{[(1+\text{inflation}) \times (1+\text{real wage rate growth})]^n - 1\}$ percent higher than the nominal level of money wage rates in the beginning year t_0.

Boundaries of Expected Wage Rate Growth

There are no theoretical conditions that constrain the components of expected wage rate growth as shown in equations (1)-(11), at any future time t, to be less than zero, equal to zero, or greater than zero. Hence, expected wage rate growth (in nominal or real terms) is unbounded: it can be less than zero, equal to zero, or greater than zero (or, the first-order conditions of equation (5) are unconstrained). Additionally, there are no theoretical conditions that constrain the functional shape of expected wage rate growth (e.g. expected wage rate growth can be decreasing, constant, or increasing). For example, economists know human capital growth to be concave, so absent an equalizing convexity in the other components of expected wage rate growth, we expect non-constant wage rate growth when human capital is a directly measured component of forecasted wage rate growth.

The absence of theoretical constraints to expected wage rate growth does not give theoretical and methodological equality to all estimates of expected wage rate growth. Any expected wage rate growth estimated for an individual must have sound theoretical, methodological, and empirical foundations based within the generally accepted economic principles. While debate can take place regarding methodologies and empirical estimates, the generally accepted theoretical or underpinning positions always hold as the fundamental basis for estimating expected wage rate growth.

Summary Discussion Regarding Wage Rate Growth

In a competitive economic system, the wage rate that an individual receives (his or her earning capacity) will tend towards his or her marginal revenue product—his or her contribution to income—unless some extenuating circumstances are persistently observed. Given that economists expect an individual's wage rate growth to occur through his or her own marginal revenue product, the factors that control the expected growth of the wage rates over time were discussed above. If for some extenuating circumstances where marginal revenue product does not determine an individual's wage rate, plausible economic explanation within the framework of the theoretical positions is required.

Changes in marginal revenue may occur due to relative price changes or inflation. Procedurally, future relative price changes are generally assumed zero or embodied within the empirical observations of industry or occupation wage change data. There are two reasons for this statement. First, individual skills are usually not so specific that a worker is permanently confined to work in one particular industry. If the relative prices in an industry decline resulting in a decreased wage rate, individuals are capable of transferring their labor to a different industry absent that impact on the wage rate. In this regard, the change in relative prices has limited consequences on wage rates. The other reason is that changes in relative prices are extremely difficult to forecast in isolation. Because of the limited relevance of a change in relative prices to wage rates and the difficultly of forecasting a change in relative prices, a specific forecast of no change in relative prices is standard in most cases.

When calculating the present value of future nominal wage rates, a nominal discount rate must be used. When calculating the present value of future real wage rates, a real discount rate must be used. Discounting nominal wage rates with real discount rates or discounting real wage rates with nominal discount rates indicates the practitioner's lack of knowledge or an attempt to deceive.

There are three basic factors that influence the marginal product of labor. These factors are innate ability, human capital, and technological change. Changes in any one of these factors will change wage rates (earning capacity), other things constant. Hence, in any particular case, the economist addresses these factors when forming estimates of wage rate growth.

An individual whose work involves physical activity may become less productive at some advanced age. This decrease in productivity would result in decreasing (or perhaps even negative) wage rate growth. Innate abilities can also be affected by injury or disability.

In general, people acquire human capital at a greater rate earlier in their worklife. For this reason, wage rates are generally expected to increase rapidly in the earlier years of the worklife; and,

human capital may flatten and then, but not necessarily, depreciate later in the worklife resulting in some decline in wage rates. To address this determinant of wage rate growth, economists on a case-by-case basis empirically construct data for life-cycle earnings patterns that coincide with the theoretical models of human capital.

It may be the case that payments to labor have increased relative to payments to capital due to technological changes implying a secular increase in wage rates. On a case-by-case basis, an economist may have evidence that this increase is expected to occur as supported by the theoretical models of technological change.

As presented, the generally accepted theoretical analysis of expected wage rate growth includes the following five components:

- expected changes in price levels;
- expected changes in relative prices;
- expected changes in individual innate ability;
- expected changes in individual human capital; and,
- expected changes in technology.

Additionally, as we point out, there may be, but not always necessarily be, other components of expected wage rate growth such as secular or efficiency wage trends, institutional influences, or persistent monopsony. The overall wage rate growth is an aggregate of these factors, some of which are specific to the individual in question. The economic justification of the wage rate growth used in a specific case must be grounded in a justification of each factor affecting wage rate growth.

Incremental Labor Cost Growth by Industry and Occupation

Wage growth is a necessary part of labor economics. In this report, we use a time series methodology to test to whether wage growth varies by industry and occupation. If growth varies, then an "all worker" net discount rate or growth level forecast is not accurate for all present value calculations of earning capacity. As expected, using the Employment Cost Index we find that the wage growth in many industries and occupations has not equaled that of all workers. That finding presents concern to the labor economist for needing to construct many net discount rates or forecast levels of wage growth. As an alternative, we provide estimates of industry and occupational growth rate differentials from that of the growth in all workers' wages. Armed with the growth rate differentials and one net discount rate or level forecast based on all workers' wage growth, the labor economist can accurately compute the present value of earning capacity across industries and occupations. The report begins with the issue of wage growth variation and a time series method to measure it. The data and results are presented along with application examples.

Reason and Measurement of Wage Growth Variation

Industries and occupations utilize technology and laborer skills differently which creates variation in the growth of its laborer's wages (Bronars and Famulari, 1997). If the growth in wages by industry and occupation differ significantly from that of all workers' wage growth, the labor economist needs to account for those differences by modifying the all worker net discount rate that is prevalent in the economic literature. Reasons for an industry or occupation exhibiting growth in labor costs unique to itself include:

- changes in technology and/or productivity in the particular industry or occupation that change the marginal productivity of labor;
- changes in the demand for the product relative to all other products that would change price and thus marginal revenue of the product produced by the industry or occupation; or,
- relative price changes of inputs used in the production of the product may change the growth in labor costs in the industry or occupation.

Despite the abundant evidence of wage growth variation across industry and occupation, economic empirical studies most often focus on the wage growth of all workers. While Paleaz (1991) and Payne et al. (1999) give net discount rates for a handful of industries, they did not test for variation in net discount rates by industry. If the wage growth in a particular industry or occupation has been significantly different than that of all workers, then using a net discount rate or forecast growth level of all workers would not produce an optimal present value appraisal of earning capacity in that particular industry or occupation.

Assume that the wages in any industry or occupation at time t is be represented by W_t° and that the wages of all workers at time t is represented as $W_t^{\blacksquare}$. We define the period-to-period ratio in the wages in a chosen industry or occupation ° to that of all workers as

$$R_t^{\circ} = \frac{W_t^{\circ}}{W_t^{\blacksquare}} \quad (12)$$

and the period growth differential in R°as

$$G_t^{\circ} = \frac{R_t^{\circ} - R_{t-1}^{\circ}}{R_{t-1}^{\circ}}. \quad (13)$$

If the growth differential series G° is stationary there is a constant mechanism separating the wage growth in the particular industry or occupation ° from that of all workers. Studying the time series properties of the growth in medical care costs, Bowles and Lewis (2000) commented on the importance of stationarity in economic forecast series. A covariance stationary series has a time invariant mean and variance such that the series fluctuates around a constant long-term mean. The unbiased forecast of a stationary series is its long-term mean. The economic literature has devoted much attention to the stationarity of the net discount rate—if the net discount rate is not stationary, then its use produces biased forecasts. If G° is stationary and the all worker net discount rate is stationary, then the mean growth in G°can be added to the all worker net discount rate (regardless of its construction) to produce a net discount rate for the particular industry or occupation °.

An accepted test for determining the stationarity of a growth series is the Phillips-Perron test. The Phillips-Perron test is an augmented Dickey-Fuller test that recognizes autocorrelation and heteroscedasticity in the disturbance. The Phillips-Perron test for a single mean, μ, in G° is determined from the autoregressive model

$$G_t^{\circ} = \mu + \rho G_{t-1}^{\circ} + u_t \quad (14)$$

where ρ is the coefficient on the lagged growth differential value, and u_t is the disturbance. Since first order autocorrelation is expected in G°, to get an unbiased estimate of the single mean growth μ, the disturbance adds a first order autocorrelation parameter to that where u_t is specified as

$$u_t = \varepsilon_t - \varphi_1 u_{t-1} \text{ and } \varepsilon_t N(0, \sigma^2). \quad (15)$$

The autoregressive model is estimated using the Yule-Walker method which first estimates the mean growth μ with generalized least squares, then φ_1 with ordinary least squares, and then using φ_1 the mean μ is re-estimated with generalized least squares. The generalized least squares approach corrects for the heteroscedasticity in the variance of the time series observations.

Data

In order to find the historical differential growth in labor costs, we utilize the Employment Cost Index ("ECI"). The Employment Cost Index is a principal federal economic indicator[3] published by the Bureau of Labor Statistics and it is based on the change in the average straight-time hourly cost of labor, free from the influence of employment shifts among occupations and industries. Detailed information on ECI concepts, coverage, and methods can be found in the BLS Handbook of Methods, Chapter 8, "National Compensation Measures."[4] In 2006, the ECI underwent revision which left many industries and occupations without data before 2001. For our analysis, we utilized all of the so-called "continuity ECI indexes" that span back as early as September 1975[5] along with the remaining top-level industry ECI series that begin in 2001. The data are current through March 2013. By industry and occupation, we use the three ECI measures of labor costs: total compensation, wages and salaries, and benefits. The ECI series utilized are those that are not seasonally adjusted. The denominator in each industry or occupation ° from equation (14) is the ECI for the wages and salaries of all private industry workers.

Results

In Table A, we show the estimation results by industry and occupation (detailed tables are presented later by individual ECI). At the top of each table section, the sector (private industry or state

[3] For information on principal federal economic indicators, see OMB Statistical Policy Directive No. 3, found June 4, 2013 on the Internet at http://www.bea.gov/about/pdf/federalregister09251985.pdf.

[4] As of June 4, 2013 on the Internet at http://www.bls.gov/opub/hom/pdf/homch8.pdf

[5] For a listing of these ECI's, see "Employment Cost Index Historical Listing – Volume V accessed on the Internet June 4, 2013 at http://www.bls.gov/web/eci/ecicois.pdf.

and local government) is listed along with the labor cost studied (total compensation, wages and salaries, or benefits). The name of the industry or occupation is shown in the first column. Next is the estimate of the mean annual growth in the particular ECI which is in excess of the all worker wage and salary ECI growth. The level of statistical significance of the growth being different from 0% is indicated (*** represents 99% confidence that the annual growth is significantly different than 0%; ** represents 95% confidence; and, * represents 90% confidence). If an annual growth differential is not statistically significant from 0%, then the growth in the wages and salaries of all workers is a suitable indicator of labor cost growth for that particular industry or occupation. If the growth differential is significantly different that zero, it can be added to the all worker net discount rate or wage growth level forecast. The analysis start date is the beginning date of the ECI series. The next two columns supply the ρ parameter estimates and the Phillips-Perron test statistic tau. All of the ρ parameters and Phillips-Perron test statistics are significant supporting stationarity in the G° wage growth series. The last two columns provide indicators of series correlation: the first-order autoregressive parameter estimate and the Durbin-Watson statistic.

For total compensation growth differentials, we utilized 30 industry and occupations. At the top level for private industry, the annual growth differential between the total compensation paid to all workers and the wages and salaries paid to all workers is a statistically significant and stationary 0.25%. This result means that when forecasting the sum of earnings and benefits, 0.25% should be annually added to the all worker wage and salary net discount rate or wage and salary growth level forecast. Assume that a chosen all worker wage and salary based net discount rate is 2%. If the labor economist was projecting earnings and benefits in a case and he or she believed that the all worker classification was relevant to the case, then the appropriate total compensation net discount rate would geometrically subtract 0.25% from the 2% all worker net discount rate. If a nominal all worker wage and salary growth forecast was 3%, then the appropriate nominal all worker compensation growth forecast would be calculated by geometrically adding 0.25% to the 3% all worker wage and salary growth forecast. If a real, inflation-free all worker wage and salary growth forecast was 0.75%, then the appropriate real, inflation-free all worker compensation growth forecast would be calculated by geometrically adding 0.25% to the 0.75% all worker wage and salary growth forecast. Looking down the list of private industry and occupation total compensation growth differentials, those that are statistically significantly different than 0% are in predominantly white-collar or high worker education sectors. Blue collar oriented industries and occupations have not had growth in total compensation which is statistically significantly different that the growth in wages and salaries of all workers. This result suggests that when the labor economist is evaluating the earnings and benefits of blue-collar type workers, the net discount rate or wage growth level forecast of all workers is a suitable in computing present value. The grouping of state and local government total compensation differentials shows significant differentials in health care, public administration, and support occupations. It is interesting that the growth differential for all state and local government workers' total compensation is double that of the growth differential for all private industry workers (0.51% versus 0.25%).

When measuring the growth differentials using wages and salaries by industry and occupation, we found that many of the stationary mean growth differentials are negative to the all worker level. For example, when determining the present value of the wage earnings of a construction worker, the labor economist would add 0.30% to his or her all worker wage and salary net discount rate (or subtract 0.30% from his or her all worker wage and salary growth level forecast). There are only six industries or occupations that have positive and significant wage and salary growth differentials. While the all union worker wage growth differential is positive, it is not significantly different from 0%. It was discovered that none of the state and local government industries or occupations produced wage and salary growth significantly different that the wage and salary growth of all private industry workers. This result suggests that an all worker net discount rate or growth level forecast is directly applicable to state and local government wage and salaries.

In all industries and occupations except manufacturing, the benefit growth differentials were positive and statistically significant. This results suggests that nearly always net discount rates or wage level growth forecasts based on the wages and salaries of all workers are not appropriate for computing the present value of lost employment benefits.

The growth differentials are quite high averaging over 1% more than the growth in all workers' wages and salaries.

Forecasting Growth Levels

The statistically significant annual growth differentials presented in Table A can be used to adjust all worker net discount rates to appropriate net discount rates for the present value of total compensation, wages and salaries, or benefits in a particular industry or occupation. Many economists do not use net discount rates but construct separate forecasts of earning capacity growth and its appropriate discount factor. While some economists provide forecasts for specific industries and occupations, many use published forecasted values provided by professional forecasters or government entities. In the table below, we present three commonly referred to forecasts and their values for long-term growth starting in 2013. To any one of these forecasts, it would be appropriate to add any of the statistically significant industry and occupation growth differentials to the forecasted value of all workers' wages and salaries in order to get a growth level specific forecast for a particular industry or occupation.

Conclusion

Although it is an important part of labor economics, wage growth by industry and occupation has received little attention in the literature. In this report, using a time series methodology we found that the growth in labor costs does vary by industry and occupation. Our finding suggests that the blanket use of all worker net discount rates or growth level forecasts is not appropriate for many industry and occupation based present value calculations of earning capacity. By providing stationary, constant mean growth differentials, we show the unbiased additions or subtractions necessary to adjust all worker net discount rates or growth level forecasts so that they are specific to industry and occupation economic cases.

Source	Forecast Variable	Real Growth	Nominal Growth
Social Security Trustee Report	Wages of workers covered by OASDI benefits	0.51% to 1.71%	3.54% to 4.33%
Congressional Budget Office	ECI Private Industry Wages and Salaries	1.39%	3.56%
Moody's Analytics	Total private average hourly earnings	0.52%	3.27%

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Tables

Table A. Results from Labor Cost Differential Growth Analysis

Sector=Private Industry, Compensation type=Total Compensation

Industry or occupation	Annual growth in excess of wages & salaries, all workers	Significance	Analysis starting date	Rho	Significance	Phillips-Perron tau test statistic	Significance	First order autoregressive parameter	Significance	Durbin-Watson
All workers	0.25%	***	1985Q1	-96.48	***	-8.92	***	-0.16		2.01
Management, business, and financial	0.41%	***	1985Q4	-114.05	***	-11.94	***	0.13		2.03
Professional and related	0.41%	***	1985Q4	-118.16	***	-10.23	***	-0.01		2.00
Sales and related	0.11%		1986Q1	-118.54	***	-11.63	***	0.13		2.00
Office and administrative support	0.50%	***	1985Q4	-125.65	***	-11.29	***	0.10		1.96
Natural resources, construction, and maintenance	0.42%	**	2001Q1	-54.63	***	-7.80	***	0.14		1.99
Installation, maintenance, and repair	0.41%		2001Q1	-50.68	***	-7.14	***	0.05		1.99
Production	0.12%		2001Q1	-35.30	***	-5.36	***	-0.25		1.98
Transportation and material moving	0.24%		2001Q1	-46.75	***	-6.60	***	-0.01		1.97
Service occupations	0.08%		1985Q1	-128.39	***	-12.81	***	0.17	*	1.97
Goods-producing industries	0.13%		1985Q1	-81.36	***	-8.13	***	-0.25		1.98
Construction	0.05%		1985Q1	-112.26	***	-11.05	***	0.05		2.01
Manufacturing	0.15%		1985Q1	-92.26	***	-8.88	***	-0.16		1.99
Service-providing industries	0.32%	***	1985Q1	-127.07	***	-11.30	***	0.09		1.96
Trade, transportation, and utilities	0.19%		2001Q1	-55.39	***	-7.76	***	0.16		1.93
Transportation and warehousing	(0.05%)		1985Q1	-125.36	***	-11.58	***	0.11		1.98
Utilities	0.49%		1987Q4	-99.58	***	-10.06	***	0.04		1.99
Wholesale trade	0.13%		2001Q1	-58.44	***	-8.74	***	0.24	*	1.94
Retail trade	0.07%		2001Q1	-57.03	***	-8.04	***	0.20		1.96
Information	0.24%		2001Q1	-47.96	***	-6.88	***	0.02		2.00
Financial activities	0.55%	**	1985Q1	-120.99	***	-11.87	***	0.11		2.00
Education and health services	0.55%	***	2001Q1	-50.80	***	-7.04	***	0.06		1.95
Education services	0.65%	**	1988Q4	-114.88	***	-12.57	***	0.24	**	2.18
Junior colleges, colleges, and universities	0.62%	**	1988Q4	-114.87	***	-12.42	***	0.23	**	2.14
Health care and social assistance	0.54%	***	2001Q1	-44.88	***	-6.24	***	-0.05		1.96
Hospitals	0.75%	***	1986Q2	-58.17	***	-6.46	***	-0.42		2.19
Nursing and residential care facilities	0.24%		2001Q1	-55.28	***	-7.44	***	0.09		1.92
Leisure and hospitality	(0.28%)		2001Q1	-45.84	***	-6.44	***	-0.03		1.94

*****=99% confidence, **=95% confidence, *=90% confidence**

Table A. Results from Labor Cost Differential Growth Analysis

Sector=Private Industry, Compensation type=Total Compensation

Industry or occupation	Annual growth in excess of wages & salaries, all workers	Significance	Analysis starting date	Rho	Significance	Phillips-Perron tau test statistic	Significance	First order autoregressive parameter	Significance	Durbin-Watson
Accommodations and food service	0.01%		2001Q1	-54.42	***	-7.50	***	0.11		1.86
All union workers	0.84%	***	2001Q1	-39.00	***	-5.71	***	-0.16		2.04

Sector=Private Industry, Compensation type=Wages & Salaries

Industry or occupation	Annual growth in excess of wages & salaries, all workers	Significance	Analysis starting date	Rho	Significance	Phillips-Perron tau test statistic	Significance	First order autoregressive parameter	Significance	Durbin-Watson
Management, business, and financial	0.28%	**	1985Q1	-115.21	***	-12.01	***	0.09		1.95
Professional and related	0.16%	*	1985Q1	-136.17	***	-12.20	***	0.16	*	1.95
Sales and related	(0.02%)		1985Q1	-129.12	***	-13.00	***	0.21	**	2.03
Office and administrative support	0.19%	***	1985Q1	-147.21	***	-15.67	***	0.36	***	2.04
Natural resources, construction, and maintenance	0.01%		2001Q1	-61.55	***	-9.38	***	0.32	**	2.10
Installation, maintenance, and repair	0.05%		2001Q1	-60.00	***	-9.05	***	0.28	*	2.16
Production	(0.23%)	**	2001Q1	-46.21	***	-6.63	***	-0.01		1.96
Transportation and material moving	(0.16%)		2001Q1	-49.09	***	-7.03	***	0.05		2.01
Service occupations	(0.22%)	**	1985Q1	-123.07	***	-12.97	***	0.18	*	2.03
Goods-producing industries	(0.18%)	***	1985Q1	-140.78	***	-13.93	***	0.28	***	2.01
Construction	(0.30%)	**	1985Q1	-116.19	***	-11.49	***	0.09		2.01
Manufacturing	(0.15%)	**	1985Q1	-128.77	***	-11.87	***	0.13		1.97
Service-providing industries	0.10%	**	1985Q1	-108.64	***	-11.18	***	0.05		1.98
Trade, transportation, and utilities	(0.17%)		2001Q1	-67.14	***	-10.40	***	0.42	***	1.94
Transportation and warehousing	(0.51%)	**	1985Q1	-106.62	***	-9.81	***	-0.06		1.99
Utilities	0.16%		1987Q4	-101.70	***	-10.12	***	0.03		1.99
Wholesale trade	(0.32%)		2001Q1	-64.51	***	-10.39	***	0.38	***	2.02
Retail trade	(0.15%)		2001Q1	-61.24	***	-9.41	***	0.32	**	2.04
Information	(0.12%)		2001Q1	-54.90	***	-8.31	***	0.19		2.02
Financial activities	0.32%		1985Q1	-126.75	***	-12.18	***	0.14		1.99
Education and health services	0.32%	**	2001Q1	-50.32	***	-7.06	***	0.06		2.00
Education services	0.31%		1988Q4	-110.09	***	-12.10	***	0.20	**	2.21

*****=99% confidence, **=95% confidence, *=90% confidence**

Table A. Results from Labor Cost Differential Growth Analysis

Sector=Private Industry, Compensation type=Wages & Salaries

Industry or occupation	Annual growth in excess of wages & salaries, all workers	Significance	Analysis starting date	Rho	Significance	Phillips-Perron tau test statistic	Significance	First order autoregressive parameter	Significance	Durbin-Watson
Junior colleges, colleges, and universities	0.25%		1988Q4	-111.37	***	-12.33	***	0.22	**	2.22
Health care and social assistance	0.31%	**	2001Q1	-43.95	***	-6.11	***	-0.06		1.90
Hospitals	0.50%	**	1986Q2	-66.80	***	-7.13	***	-0.33		2.05
Nursing and residential care facilities	0.07%		2001Q1	-54.43	***	-7.31	***	0.06		1.92
Leisure and hospitality	(0.36%)		2001Q1	-43.40	***	-6.19	***	-0.07		1.98
Accommodations and food service	(0.08%)		2001Q1	-55.07	***	-7.77	***	0.12		1.86
All union workers	0.19%		2001Q1	-52.76	***	-7.44	***	0.11		1.93

Sector=Private Industry, Compensation type=Benefits

Industry or occupation	Annual growth in excess of wages & salaries, all workers	Significance	Analysis starting date	Rho	Significance	Phillips-Perron tau test statistic	Significance	First order autoregressive parameter	Significance	Durbin-Watson
All workers	0.83%	***	1985Q1	-80.45	***	-8.01	***	-0.27		2.00
Natural resources, construction, and maintenance	1.28%	**	2001Q1	-38.22	***	-5.58	***	-0.19		2.01
Service occupations	0.97%	***	1985Q3	-75.80	***	-7.58	***	-0.31		2.06
Goods-producing industries	0.76%	*	1985Q1	-83.64	***	-8.21	***	-0.25		2.02
Manufacturing	0.76%		1985Q1	-95.25	***	-9.01	***	-0.15		2.01
Service-providing industries	0.90%	***	1985Q1	-95.12	***	-8.83	***	-0.16		2.00
All union workers	1.96%	***	2001Q1	-40.48	***	-5.87	***	-0.13		2.02

Sector=State & Local Government, Compensation type=Total Compensation

Industry or occupation	Annual growth in excess of wages & salaries, all workers	Significance	Analysis starting date	Rho	Significance	Phillips-Perron tau test statistic	Significance	First order autoregressive parameter	Significance	Durbin-Watson
All workers	0.51%	**	1985Q1	-120.92	***	-12.75	***	0.17	*	2.05
Professional and related	0.23%		1989Q2	-102.70	***	-11.70	***	0.12		1.93
Office and administrative support	0.42%	**	1989Q2	-105.28	***	-11.51	***	0.13		1.93
Service occupations	0.72%	***	1985Q1	-127.71	***	-12.89	***	0.19	**	2.02
Education services	0.22%		1989Q1	-108.91	***	-11.48	***	0.17		2.12
Schools	0.49%		1985Q1	-112.09	***	-13.01	***	0.17	*	2.11

*****=99% confidence, **=95% confidence, *=90% confidence**

Table A. Results from Labor Cost Differential Growth Analysis

Sector=State & Local Government, Compensation type=Total Compensation

Industry or occupation	Annual growth in excess of wages & salaries, all workers	Significance	Analysis starting date	Rho	Significance	Phillips-Perron tau test statistic	Significance	First order autoregressive parameter	Significance	Durbin-Watson
Elementary and secondary schools	0.49%		1985Q1	-107.73	***	-12.49	***	0.13		2.10
Health care and social assistance	0.83%	***	2001Q1	-52.72	***	-7.69	***	0.13		2.03
Hospitals	0.51%	**	1988Q1	-91.36	***	-9.82	***	-0.01		1.99
Public administration	0.54%	***	1985Q1	-147.72	***	-13.24	***	0.24	**	1.88

Sector=State & Local Government, Compensation type=Wages & Salaries

Industry or occupation	Annual growth in excess of wages & salaries, all workers	Significance	Analysis starting date	Rho	Significance	Phillips-Perron tau test statistic	Significance	First order autoregressive parameter	Significance	Durbin-Watson
All workers	0.16%		1985Q1	-120.91	***	-13.76	***	0.22	**	2.11
Professional and related	(0.05%)		1989Q2	-104.07	***	-12.01	***	0.14		1.98
Office and administrative support	(0.12%)		1989Q2	-111.05	***	-12.53	***	0.21	**	2.03
Service occupations	0.24%		1985Q1	-124.82	***	-13.27	***	0.20	**	2.06
Education services	(0.08%)		1989Q1	-109.67	***	-11.70	***	0.18	*	2.16
Schools	0.20%		1985Q1	-110.90	***	-13.48	***	0.18	*	2.14
Elementary and secondary schools	0.20%		1985Q1	-108.78	***	-13.26	***	0.17	*	2.14
Health care and social assistance	0.35%		2001Q1	-45.37	***	-6.47	***	-0.03		1.98
Hospitals	0.24%		1988Q1	-93.44	***	-10.33	***	0.04		2.01
Public administration	0.05%		1985Q1	-148.52	***	-14.32	***	0.30	***	1.95

Sector=State & Local Government, Compensation type=Benefits

Industry or occupation	Annual growth in excess of wages & salaries, all workers	Significance	Analysis starting date	Rho	Significance	Phillips-Perron tau test statistic	Significance	First order autoregressive parameter	Significance	Durbin-Watson
All workers	1.15%	***	1989Q2	-88.98	***	-9.67	***	-0.05		1.90

***=99% confidence, **=95% confidence, *=90% confidence

Table 1. Total Compensation, Private Industry: All workers

LABSTAT series identifier: CIU2010000000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-96.4846	Z_{Tau}	-8.9229
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0630	AR(1) coefficient	-0.1568
Standard error	0.0204	Standard error	0.0942
t-statistic	3.0849	t-statistic	-1.6647
Probability t	0.0026	Durbin-Watson	2.0192

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.252%

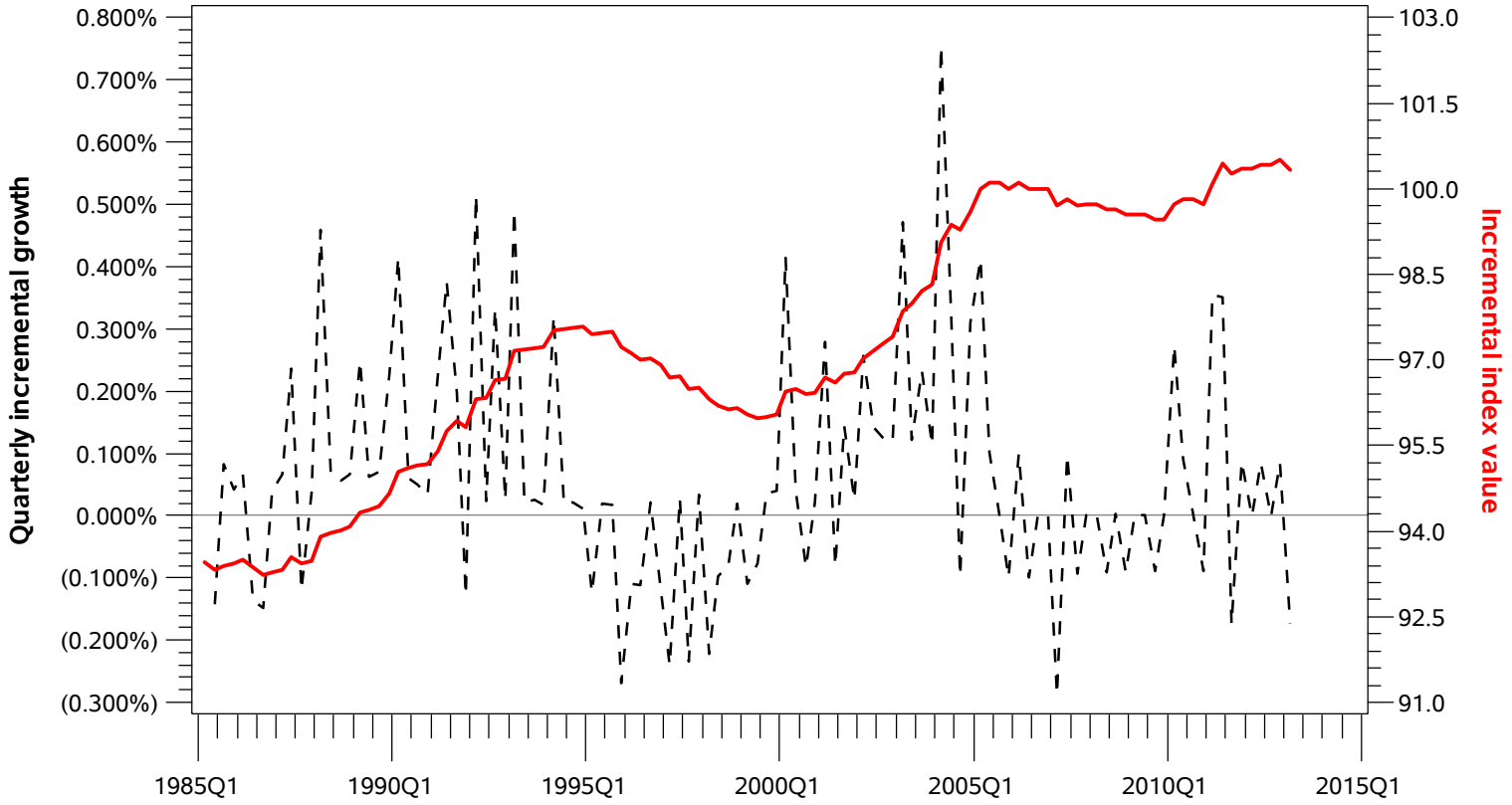


Table 2. Benefits, Private Industry: All workers

LABSTAT series identifier: CIU2030000000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-80.4503	Z_{Tau}	-8.0087
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.2078	AR(1) coefficient	-0.2683
Standard error	0.0756	Standard error	0.0919
t-statistic	2.7497	t-statistic	-2.9207
Probability t	0.0070	Durbin-Watson	2.0036

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.834%

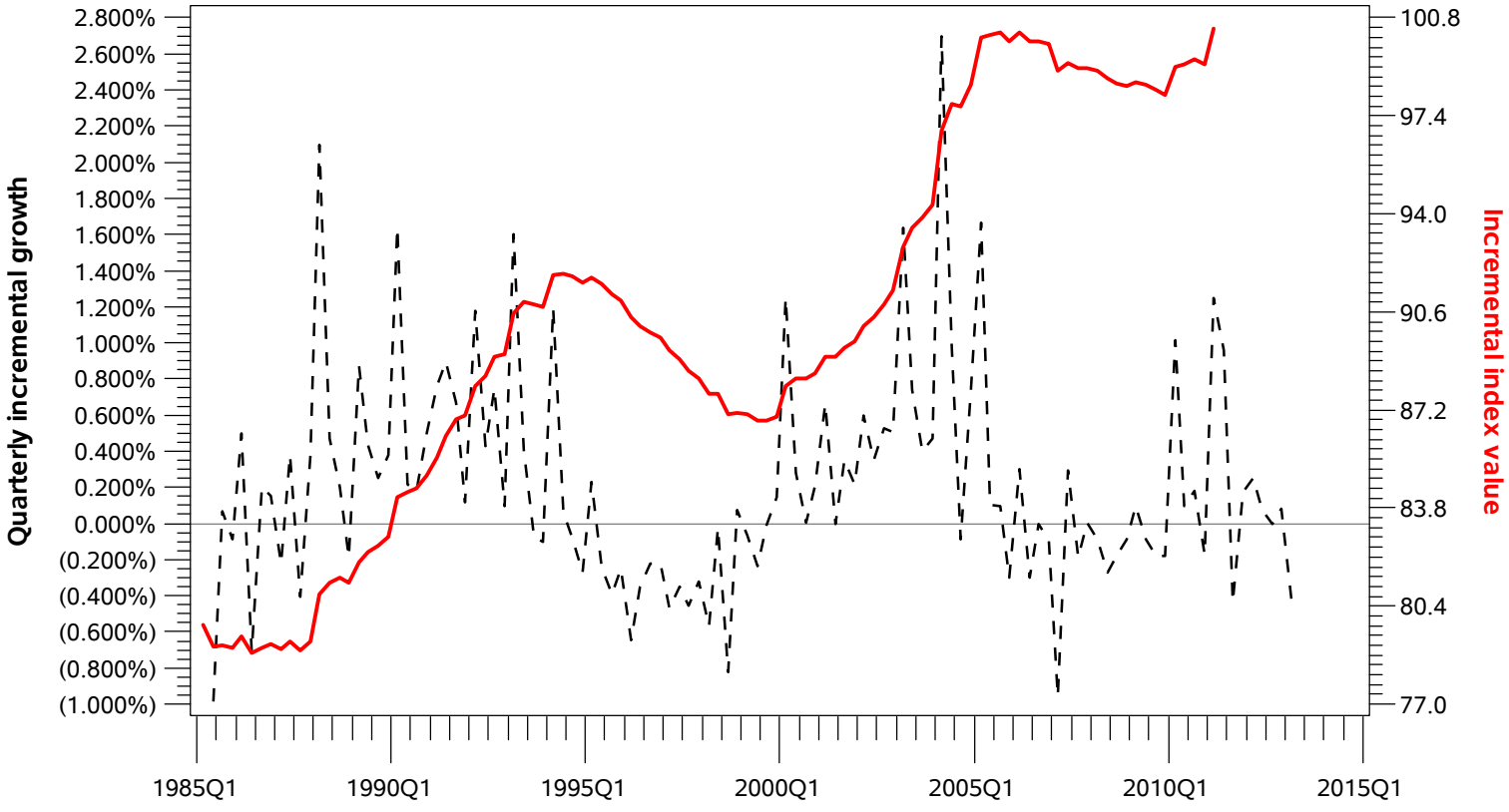


Table 3. Total Compensation, Private Industry: Management, business, and financial

LABSTAT series identifier: CIU2010000110000I

Historical data period: DEC-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-114.0492	Z_{Tau}	-11.9379
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1021	AR(1) coefficient	0.1280
Standard error	0.0330	Standard error	0.0959
t-statistic	3.0975	t-statistic	1.3346
Probability t	0.0025	Durbin-Watson	2.0305

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.409%

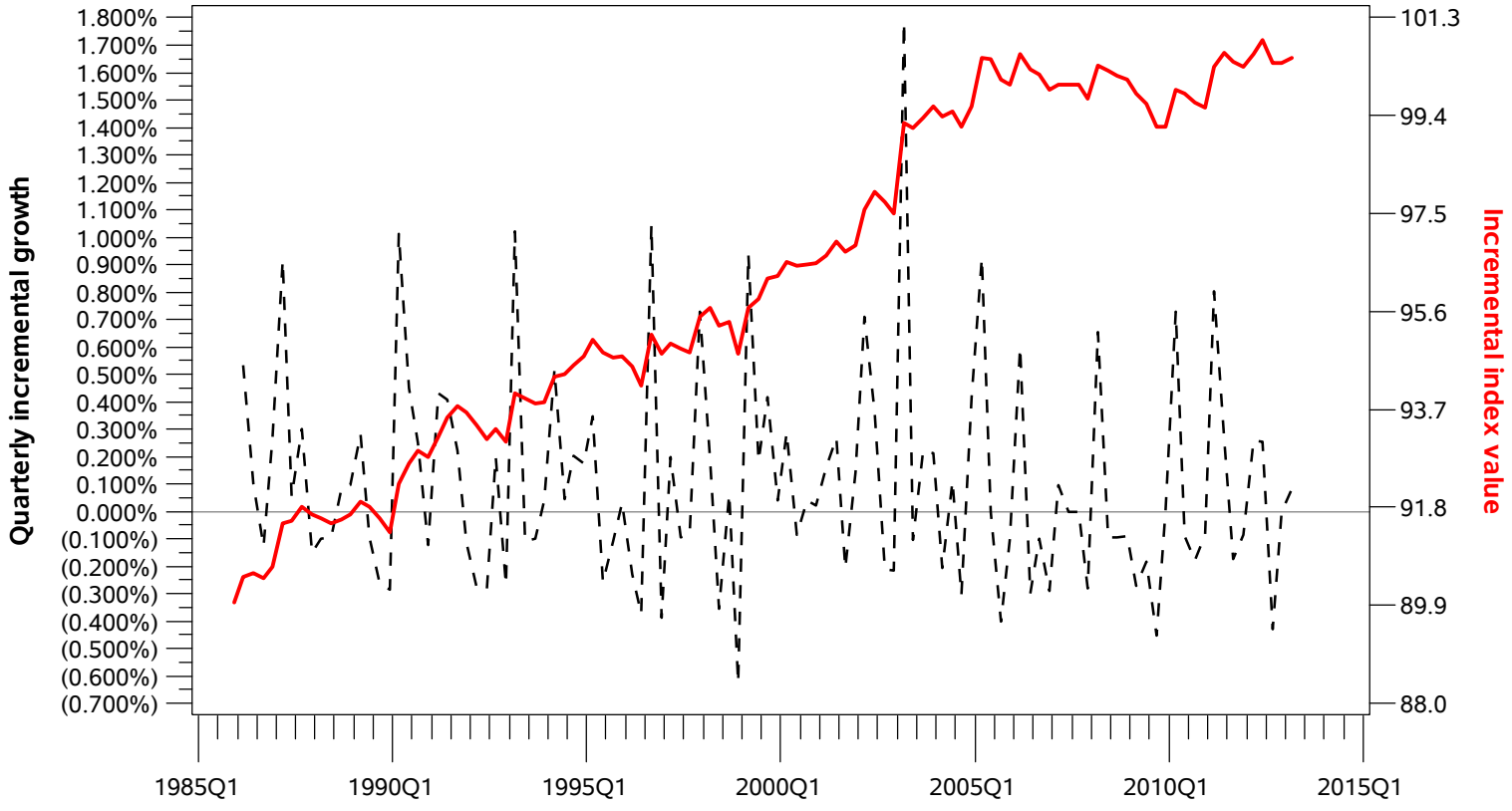


Table 4. Wages and Salaries, Private Industry: Management, business, and financial

LABSTAT series identifier: CIU2020000110000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-115.2137	Z_{Tau}	-12.0051
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0705	AR(1) coefficient	0.0907
Standard error	0.0324	Standard error	0.0950
t-statistic	2.1781	t-statistic	0.9554
Probability t	0.0315	Durbin-Watson	1.9509

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.282%

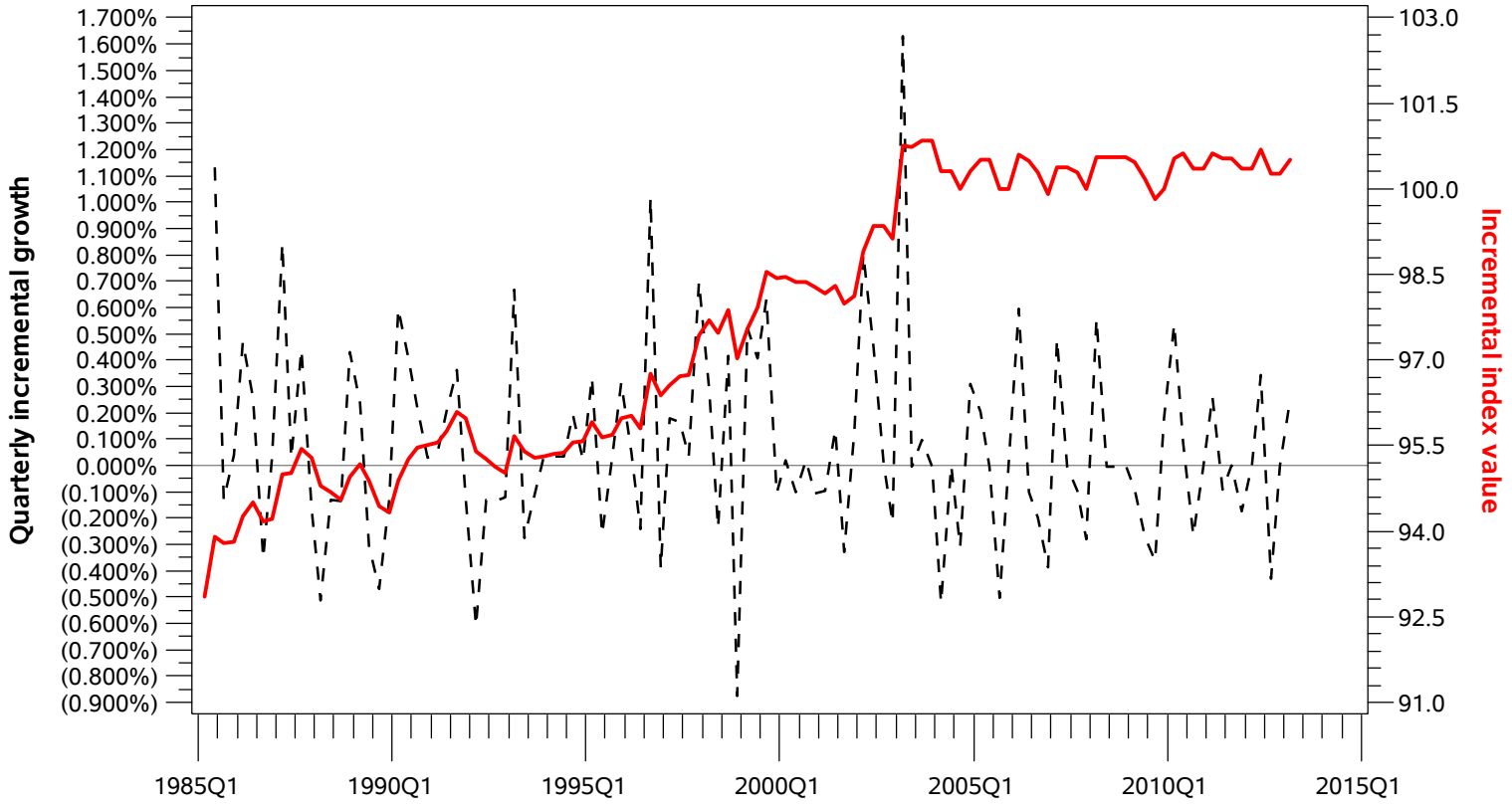


Table 5. Total Compensation, Private Industry: Professional and related

LABSTAT series identifier: CIU2010000120000I

Historical data period: DEC-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-118.1596	Z_{Tau}	-10.2345
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1034	AR(1) coefficient	-0.0129
Standard error	0.0309	Standard error	0.0967
t-statistic	3.3434	t-statistic	-0.1338
Probability t	0.0011	Durbin-Watson	2.0005

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.414%

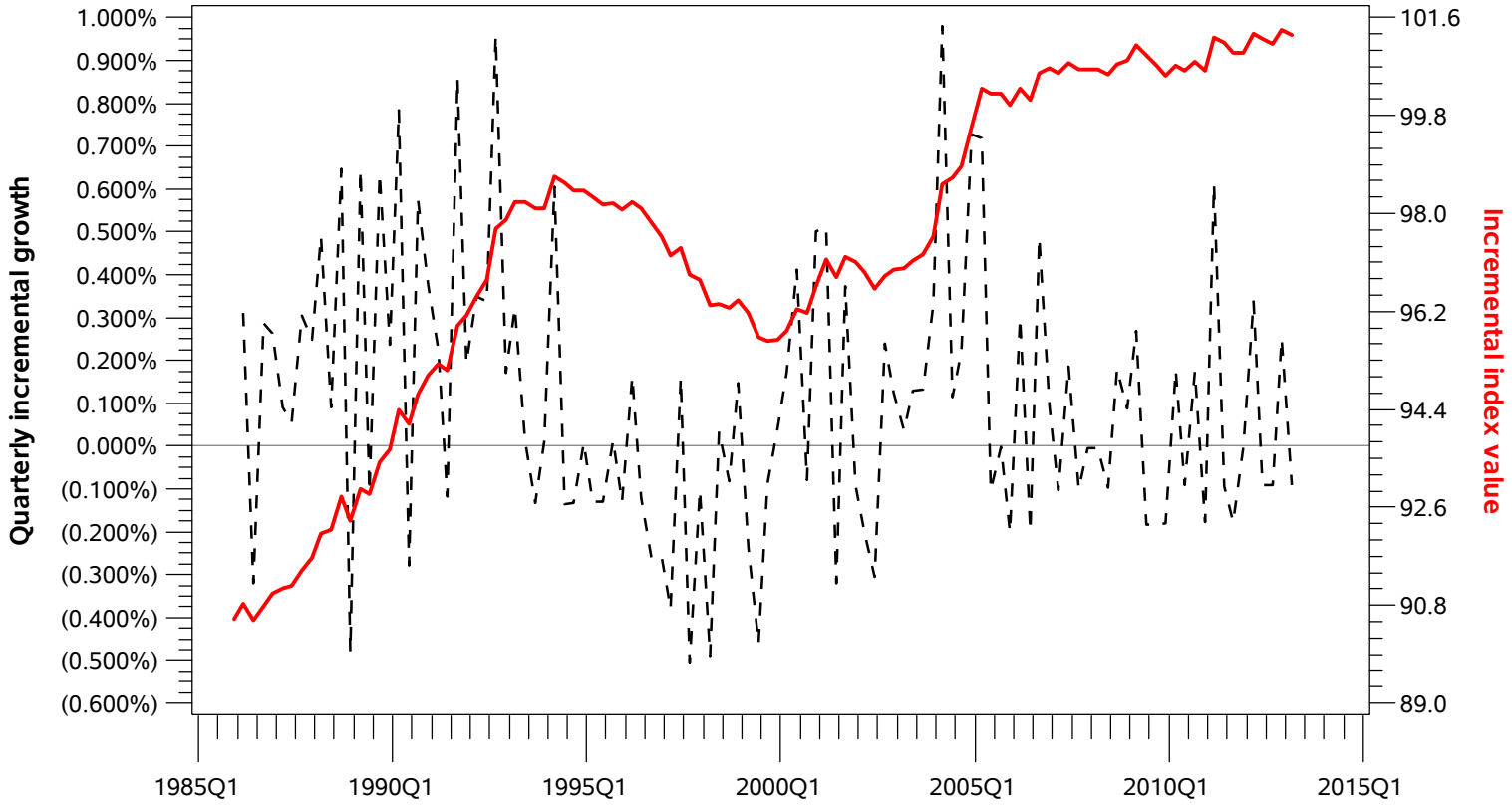


Table 6. Wages and Salaries, Private Industry: Professional and related

LABSTAT series identifier: CIU2020000120000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-136.1676	Z_{Tau}	-12.1989
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0391	AR(1) coefficient	0.1602
Standard error	0.0225	Standard error	0.0941
t-statistic	1.7411	t-statistic	1.7022
Probability t	0.0845	Durbin-Watson	1.9539

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.157%

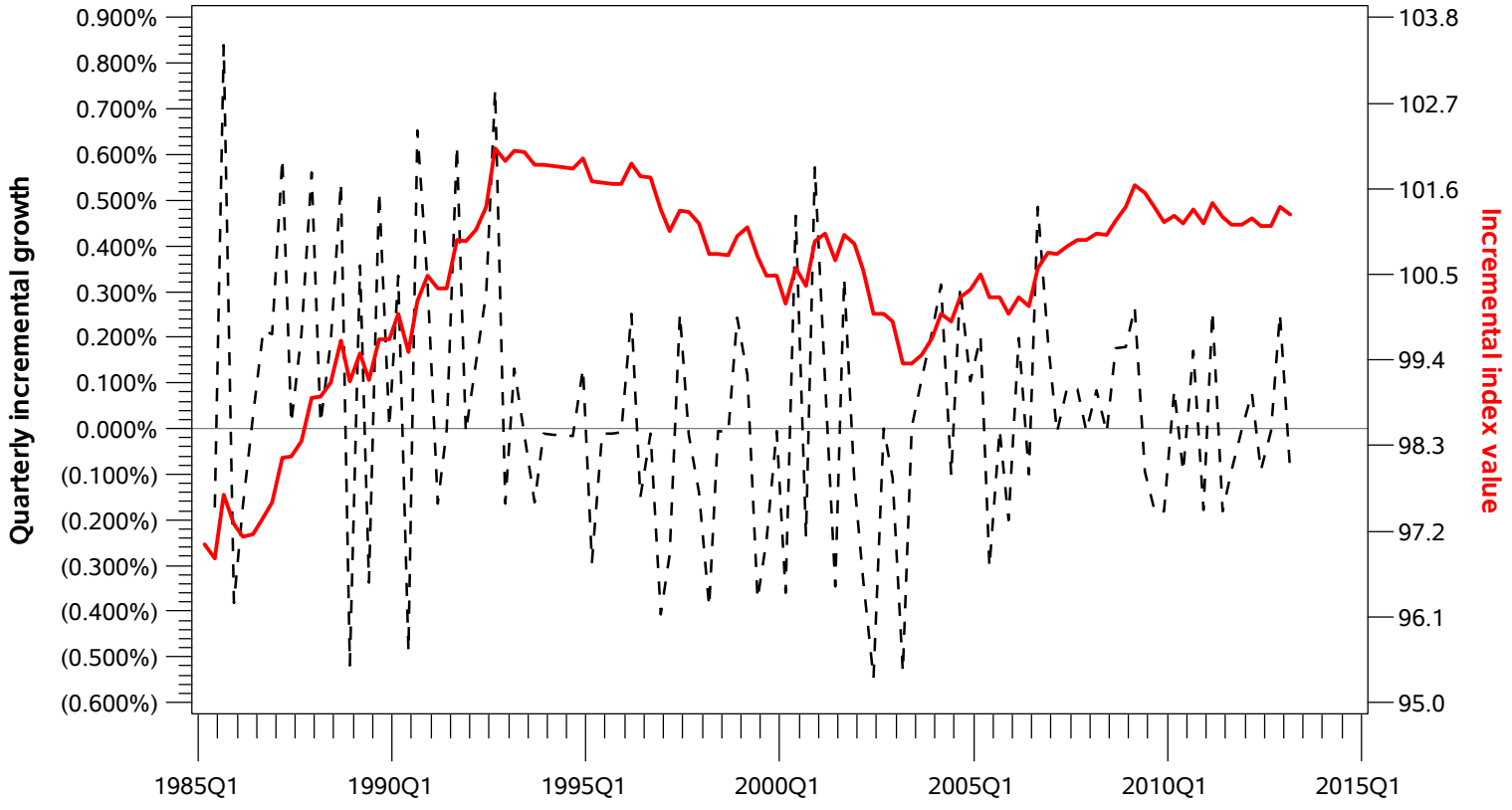


Table 7. Total Compensation, Private Industry: Sales and related

LABSTAT series identifier: CIU2010000210000I

Historical data period: MAR-1986 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-118.5390	Z_{Tau}	-11.6321
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0286	AR(1) coefficient	0.1278
Standard error	0.0577	Standard error	0.0963
t-statistic	0.4967	t-statistic	1.3270
Probability t	0.6204	Durbin-Watson	2.0006

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.115%

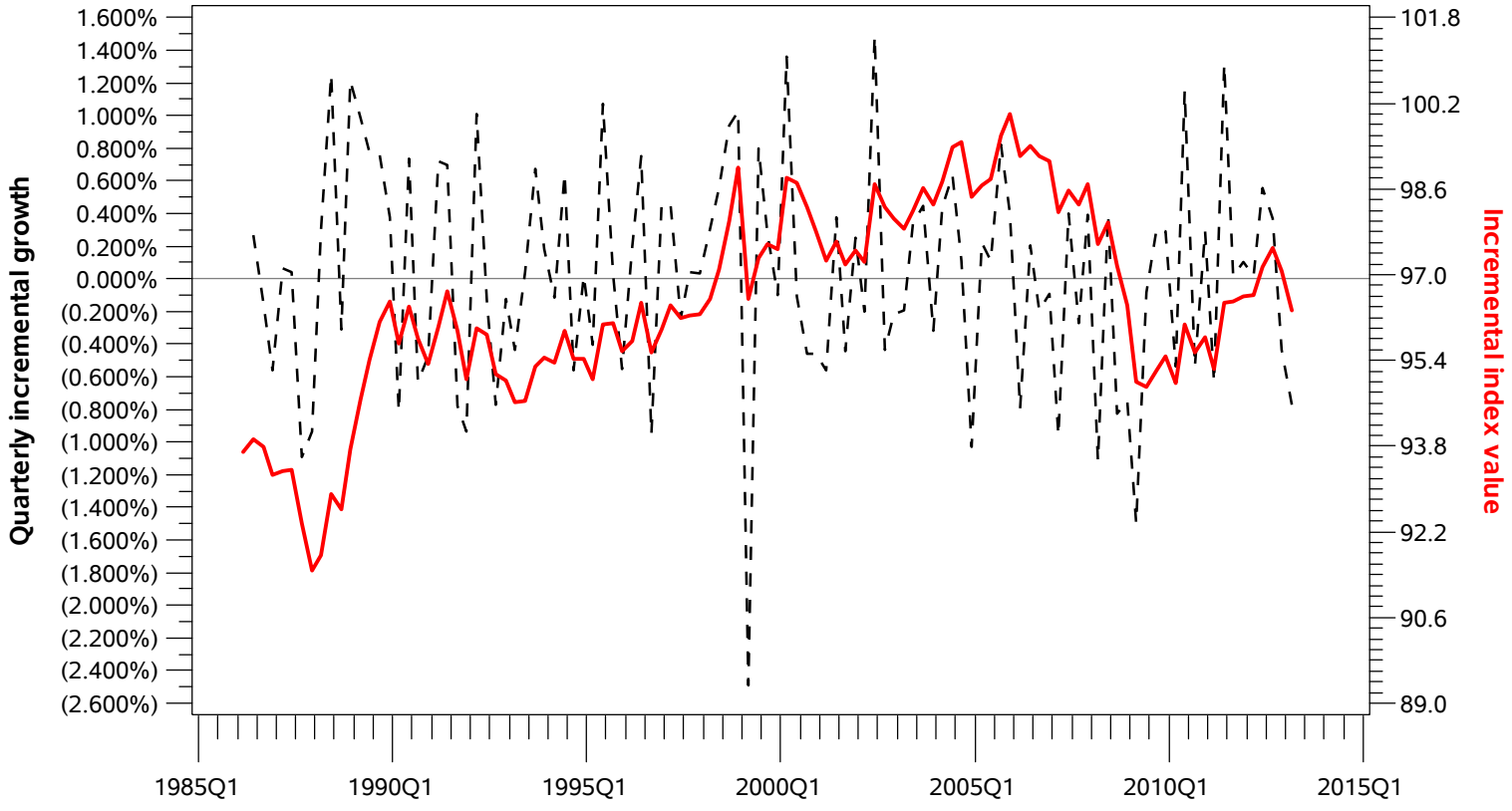


Table 8. Wages and Salaries, Private Industry: Sales and related

LABSTAT series identifier: CIU2020000210000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-129.1221	Z_{Tau}	-13.0005
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	-0.0050	AR(1) coefficient	0.2060
Standard error	0.0631	Standard error	0.0933
t-statistic	-0.0785	t-statistic	2.2077
Probability t	0.9376	Durbin-Watson	2.0398

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: (0.020%)

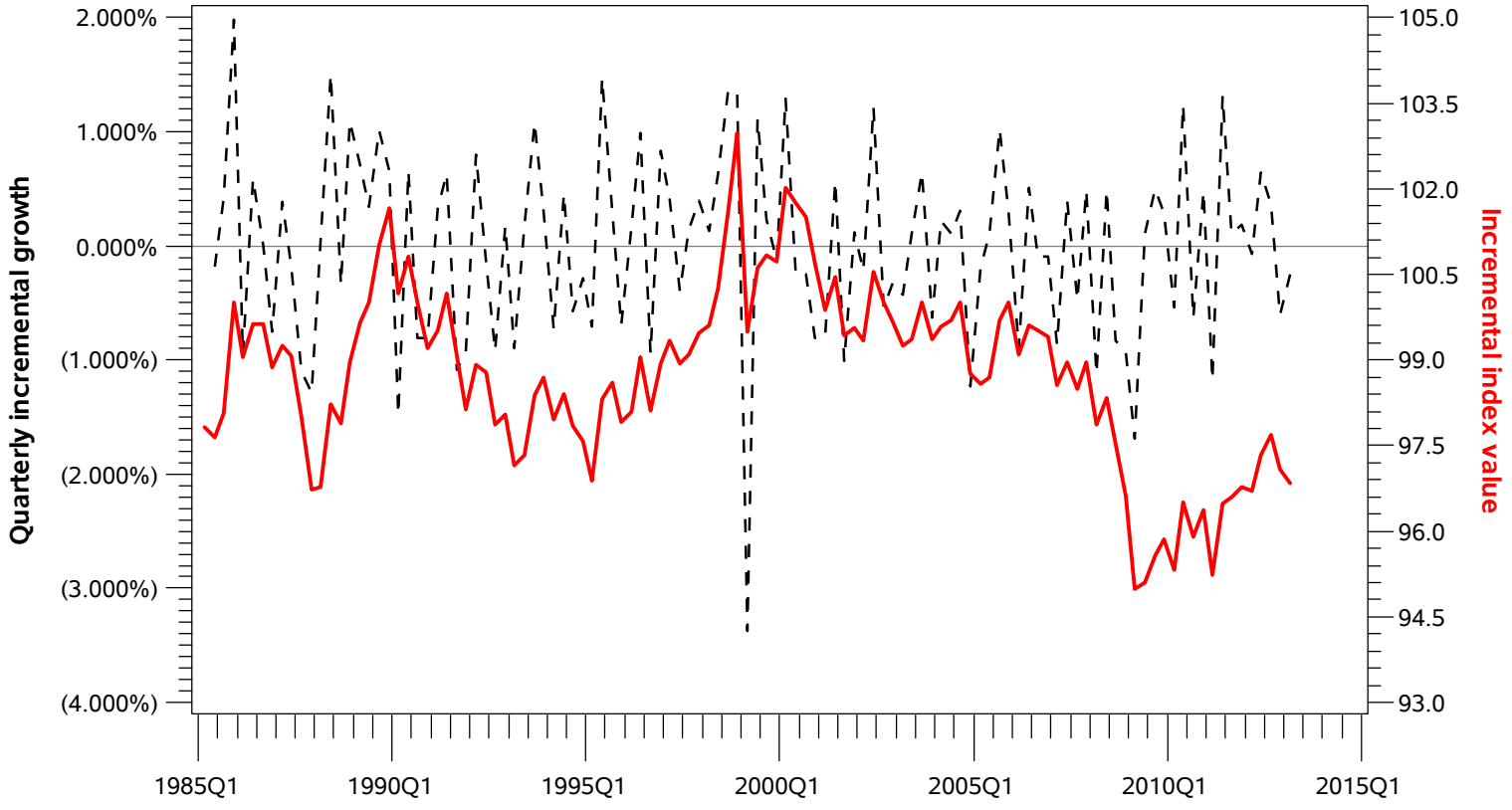


Table 9. Total Compensation, Private Industry: Office and administrative support

LABSTAT series identifier: CIU2010000220000I

Historical data period: DEC-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-125.6519	Z_{Tau}	-11.2909
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1237	AR(1) coefficient	0.0952
Standard error	0.0250	Standard error	0.0962
t-statistic	4.9575	t-statistic	0.9898
Probability t	0.0000	Durbin-Watson	1.9627

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.496%

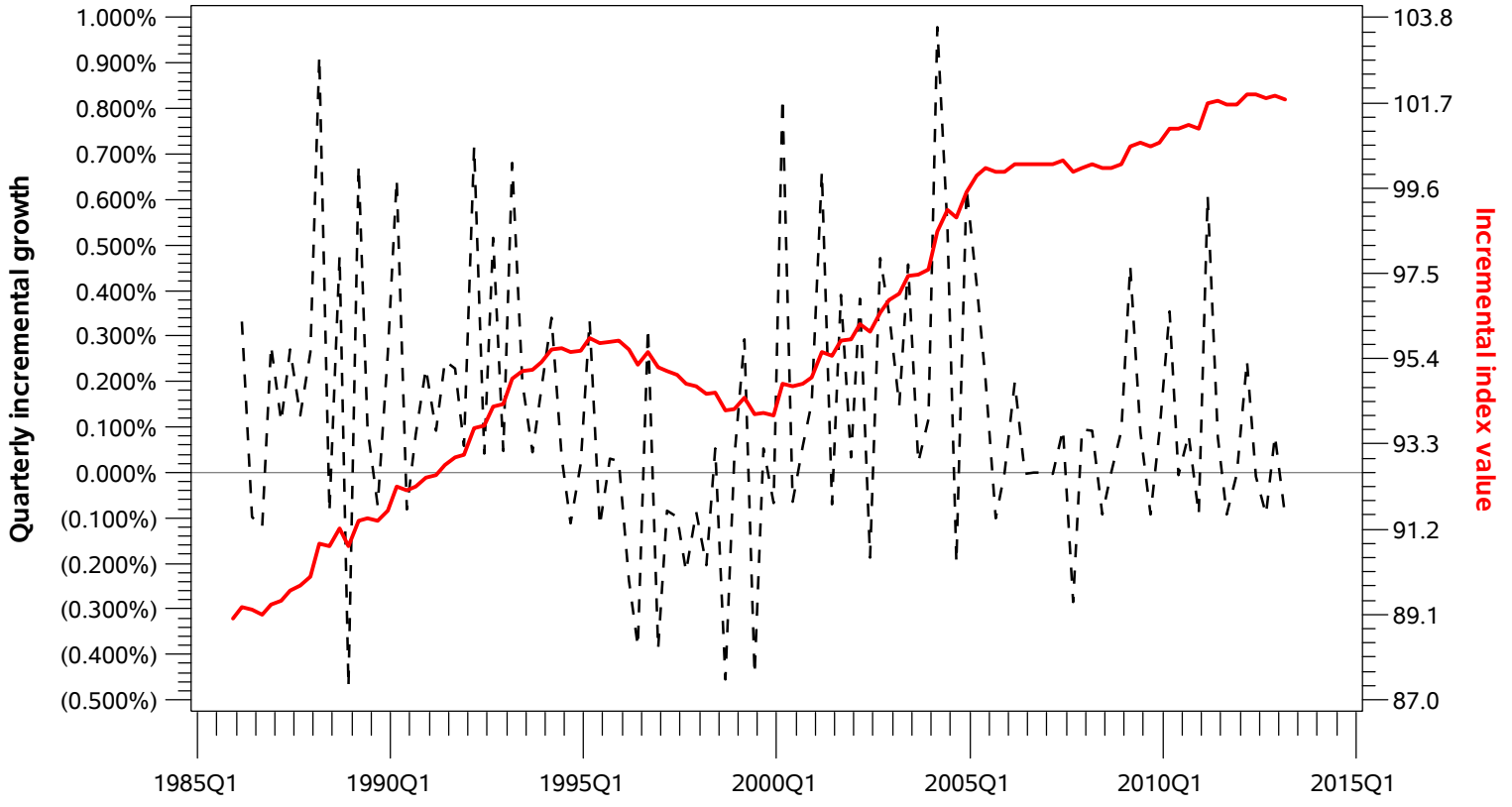


Table 10. Wages and Salaries, Private Industry: Office and administrative support

LABSTAT series identifier: CIU2020000220000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-147.2113	Z_{Tau}	-15.6687
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0483	AR(1) coefficient	0.3648
Standard error	0.0134	Standard error	0.0888
t-statistic	3.5913	t-statistic	4.1095
Probability t	0.0005	Durbin-Watson	2.0476

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.193%

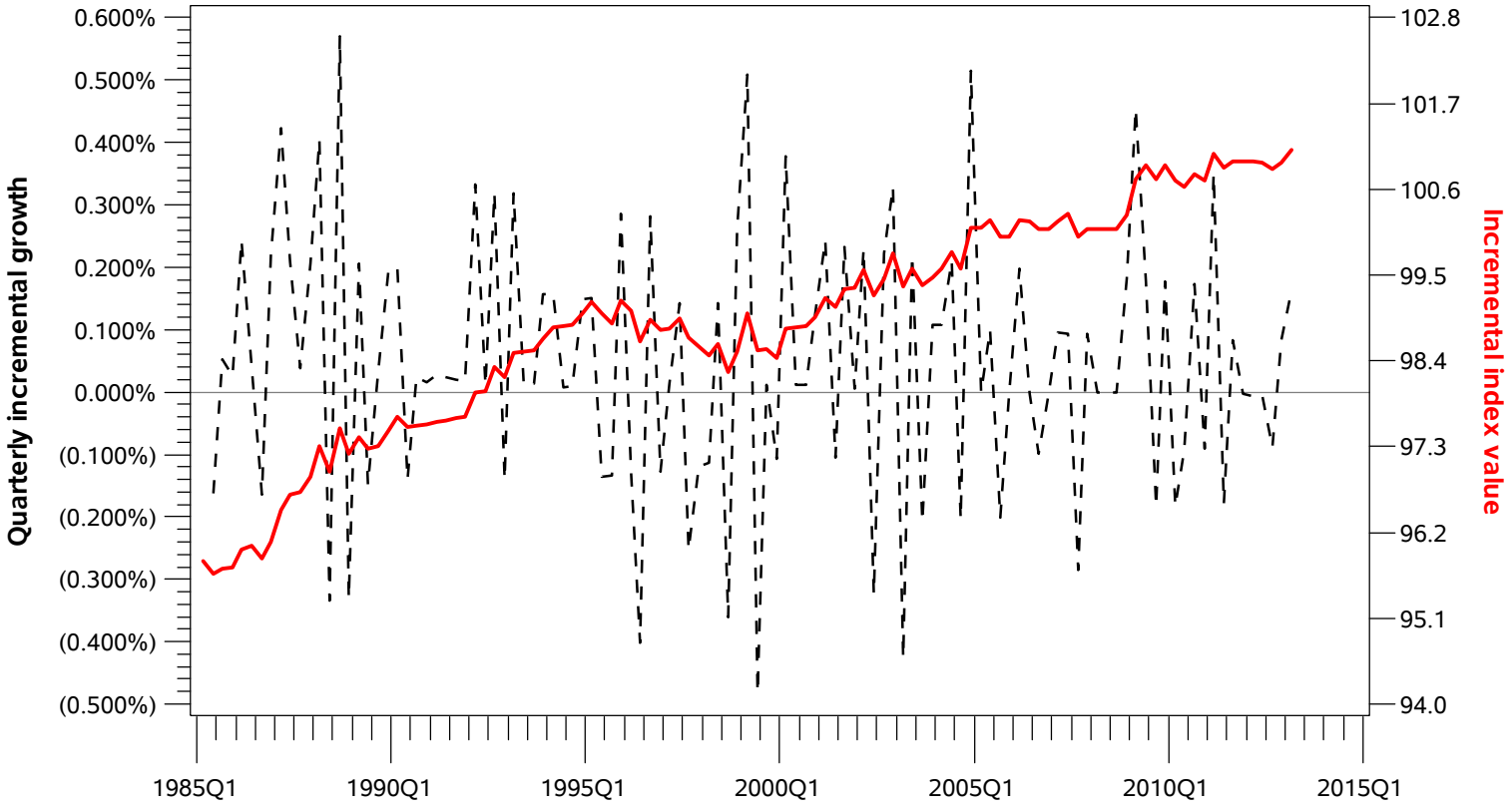


Table 11. Total Compensation, Private Industry: Natural resources, construction, and maintenance

LABSTAT series identifier: CIU2010000400000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-54.6304	Z_{Tau}	-7.7989
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1052	AR(1) coefficient	0.1428
Standard error	0.0396	Standard error	0.1459
t-statistic	2.6564	t-statistic	0.9788
Probability t	0.0108	Durbin-Watson	1.9937

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.421%

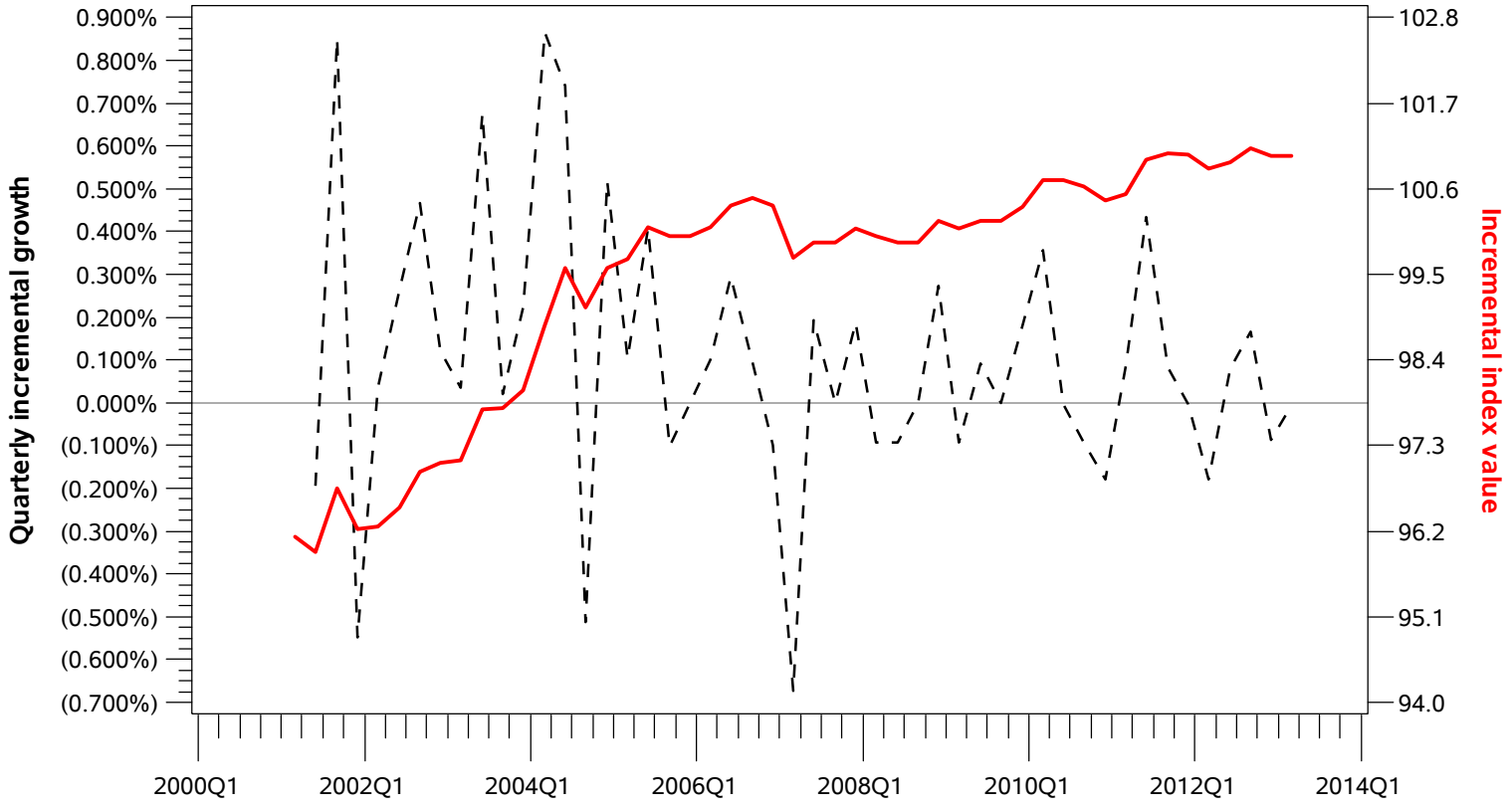


Table 12. Wages and Salaries, Private Industry: Natural resources, construction, and maintenance

LABSTAT series identifier: CIU2020000400000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-61.5539	Z_{Tau}	-9.3765
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0024	AR(1) coefficient	0.3188
Standard error	0.0294	Standard error	0.1397
t-statistic	0.0826	t-statistic	2.2811
Probability t	0.9345	Durbin-Watson	2.1011

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.010%

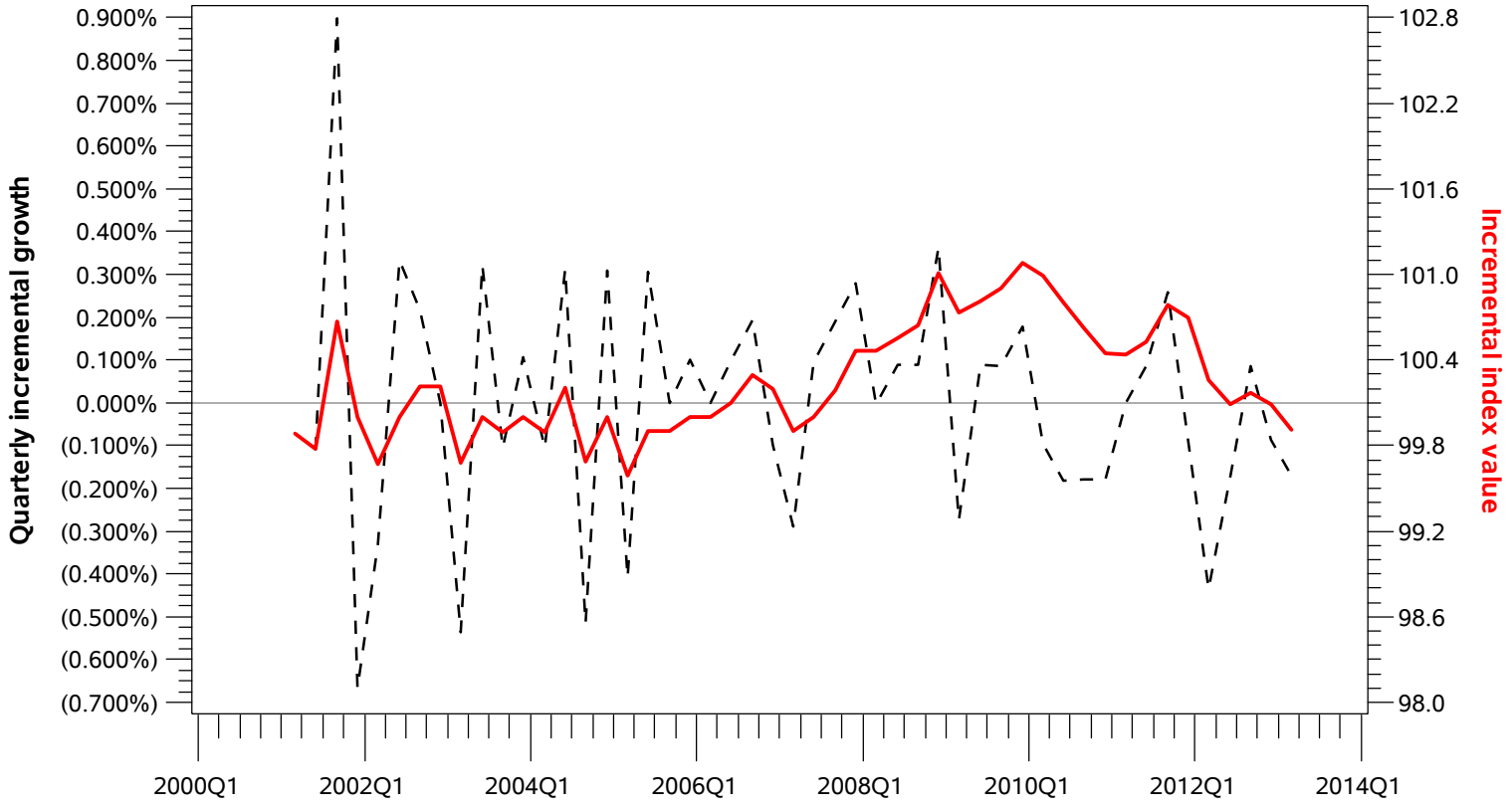


Table 13. Benefits, Private Industry: Natural resources, construction, and maintenance

LABSTAT series identifier: CIU2030000400000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-38.2158	Z_{Tau}	-5.5795
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.3196	AR(1) coefficient	-0.1894
Standard error	0.1218	Standard error	0.1448
t-statistic	2.6243	t-statistic	-1.3081
Probability t	0.0117	Durbin-Watson	2.0137

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 1.285%

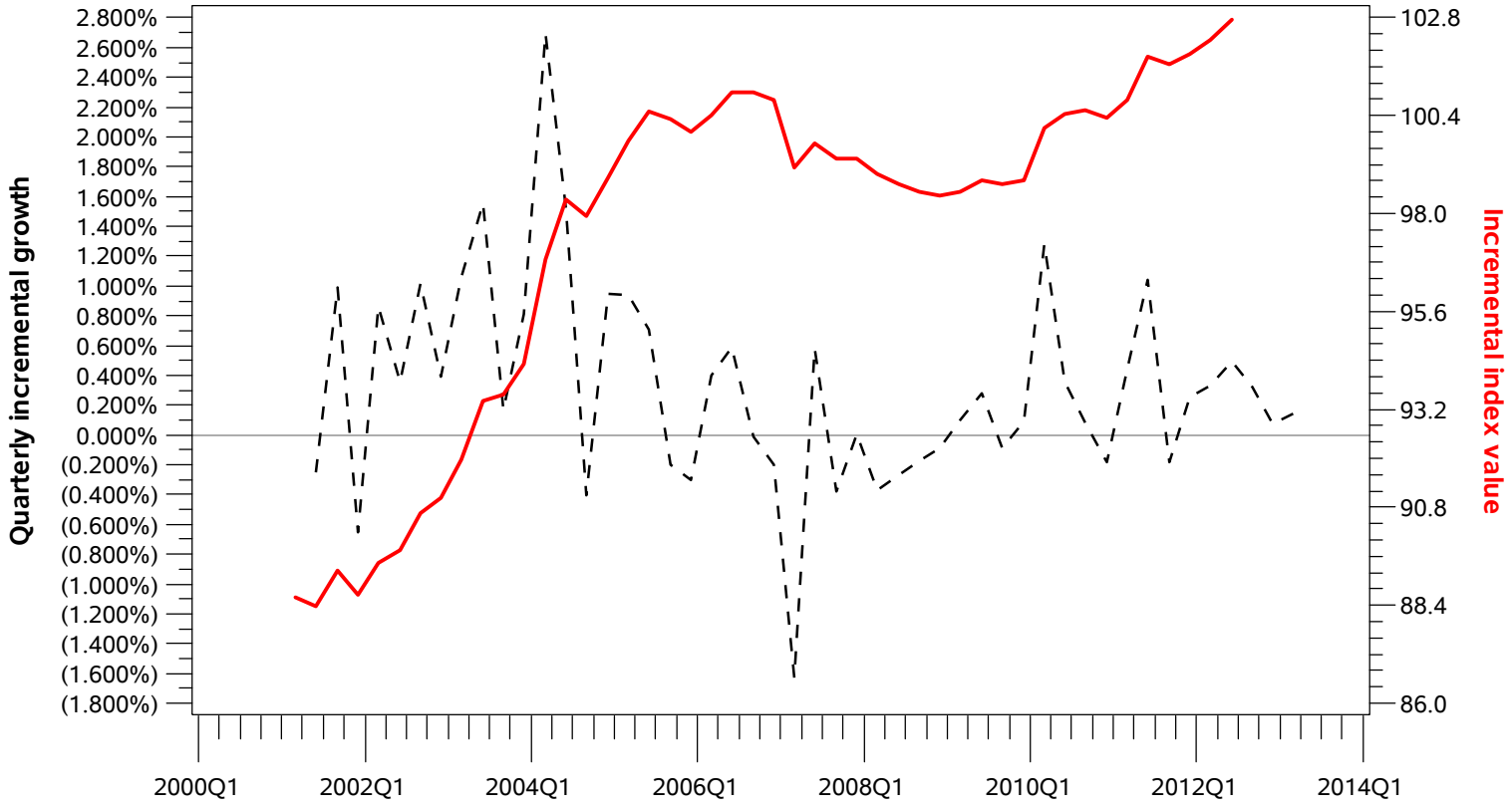


Table 14. Total Compensation, Private Industry: Installation, maintenance, and repair

LABSTAT series identifier: CIU2010000430000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-50.6843	Z_{Tau}	-7.1434
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1028	AR(1) coefficient	0.0493
Standard error	0.0630	Standard error	0.1473
t-statistic	1.6309	t-statistic	0.3345
Probability t	0.1097	Durbin-Watson	1.9996

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.412%

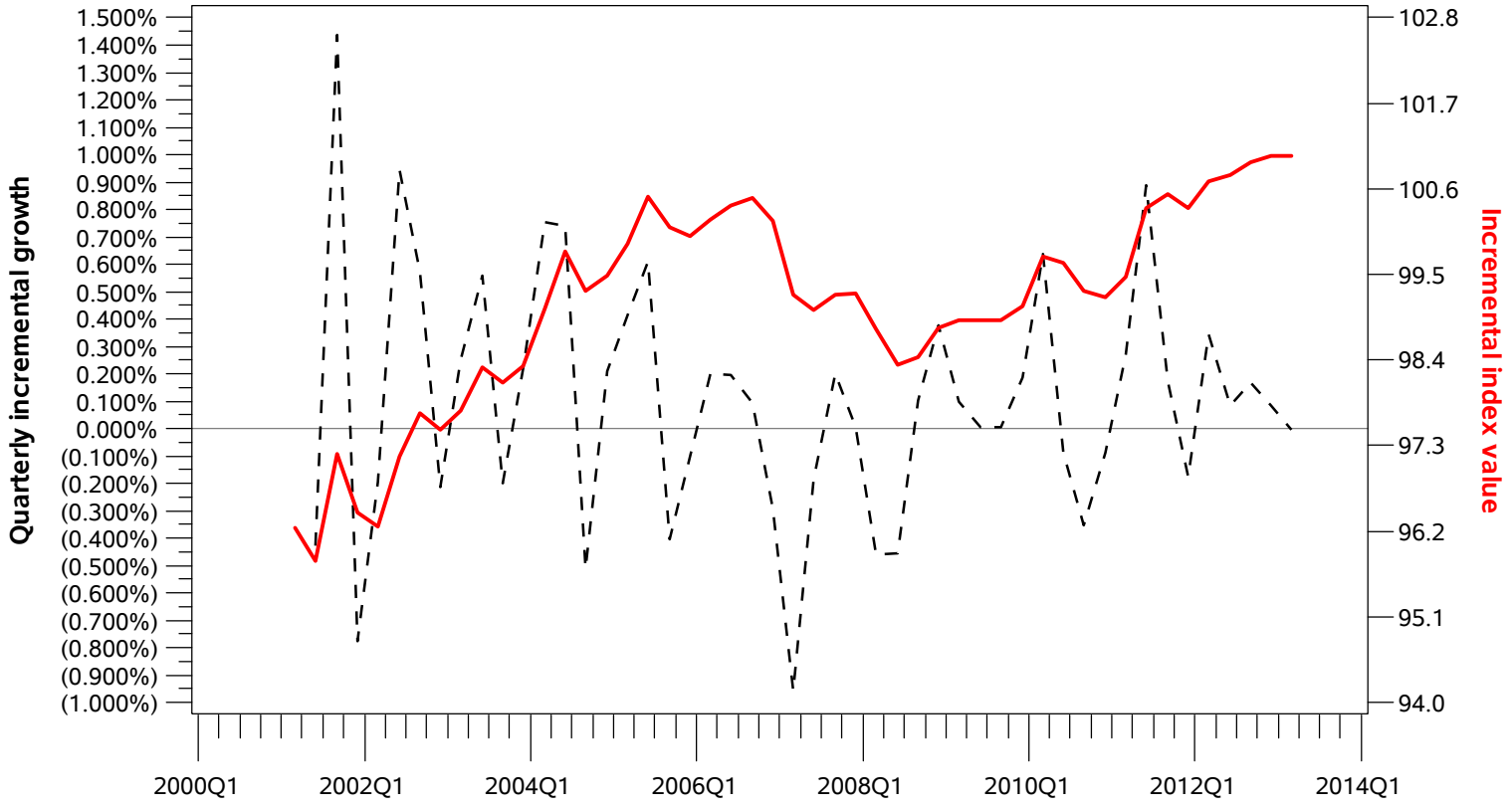


Table 15. Wages and Salaries, Private Industry: Installation, maintenance, and repair

LABSTAT series identifier: CIU2020000430000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-59.9961	Z_{Tau}	-9.0477
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0134	AR(1) coefficient	0.2778
Standard error	0.0473	Standard error	0.1416
t-statistic	0.2825	t-statistic	1.9610
Probability t	0.7788	Durbin-Watson	2.1605

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.053%

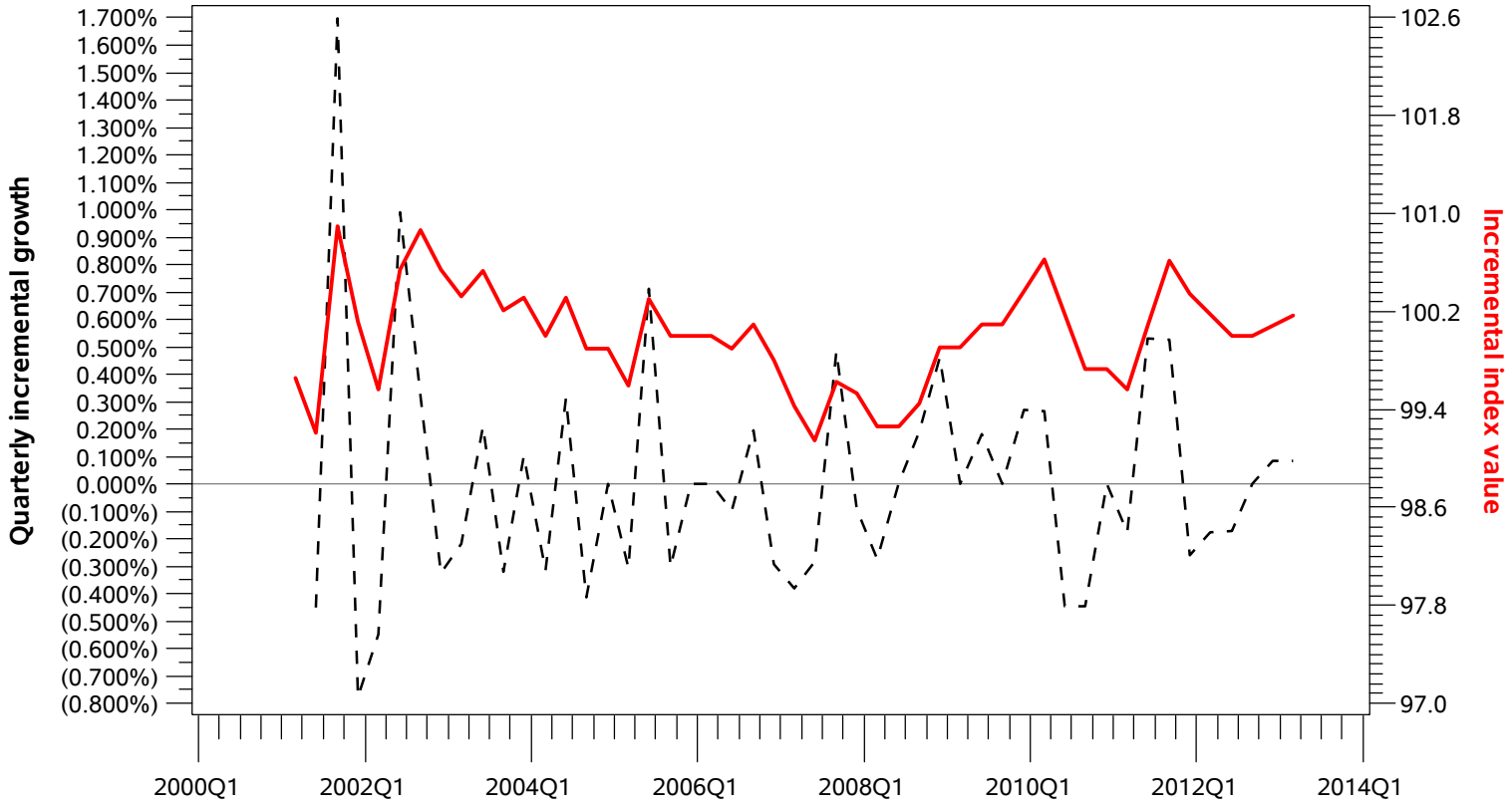


Table 16. Total Compensation, Private Industry: Production

LABSTAT series identifier: CIU2010000510000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-35.2981	Z_{Tau}	-5.3644
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0302	AR(1) coefficient	-0.2473
Standard error	0.0791	Standard error	0.1429
t-statistic	0.3815	t-statistic	-1.7310
Probability t	0.7046	Durbin-Watson	1.9835

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.121%

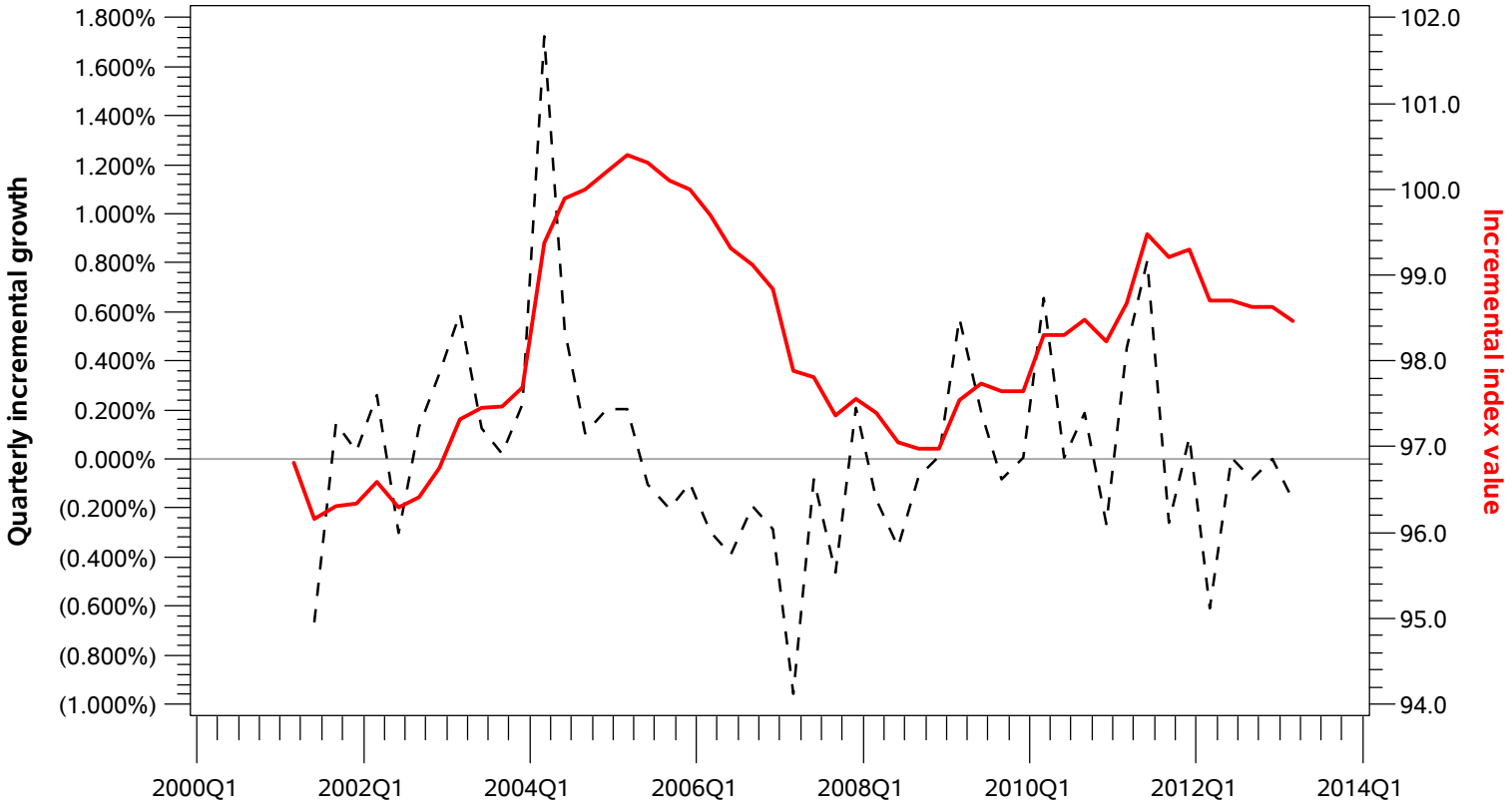


Table 17. Wages and Salaries, Private Industry: Production

LABSTAT series identifier: CIU2020000510000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-46.2059	Z_{Tau}	-6.6314
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	-0.0576	AR(1) coefficient	-0.0127
Standard error	0.0269	Standard error	0.1474
t-statistic	-2.1461	t-statistic	-0.0863
Probability t	0.0372	Durbin-Watson	1.9649

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: (0.230%)

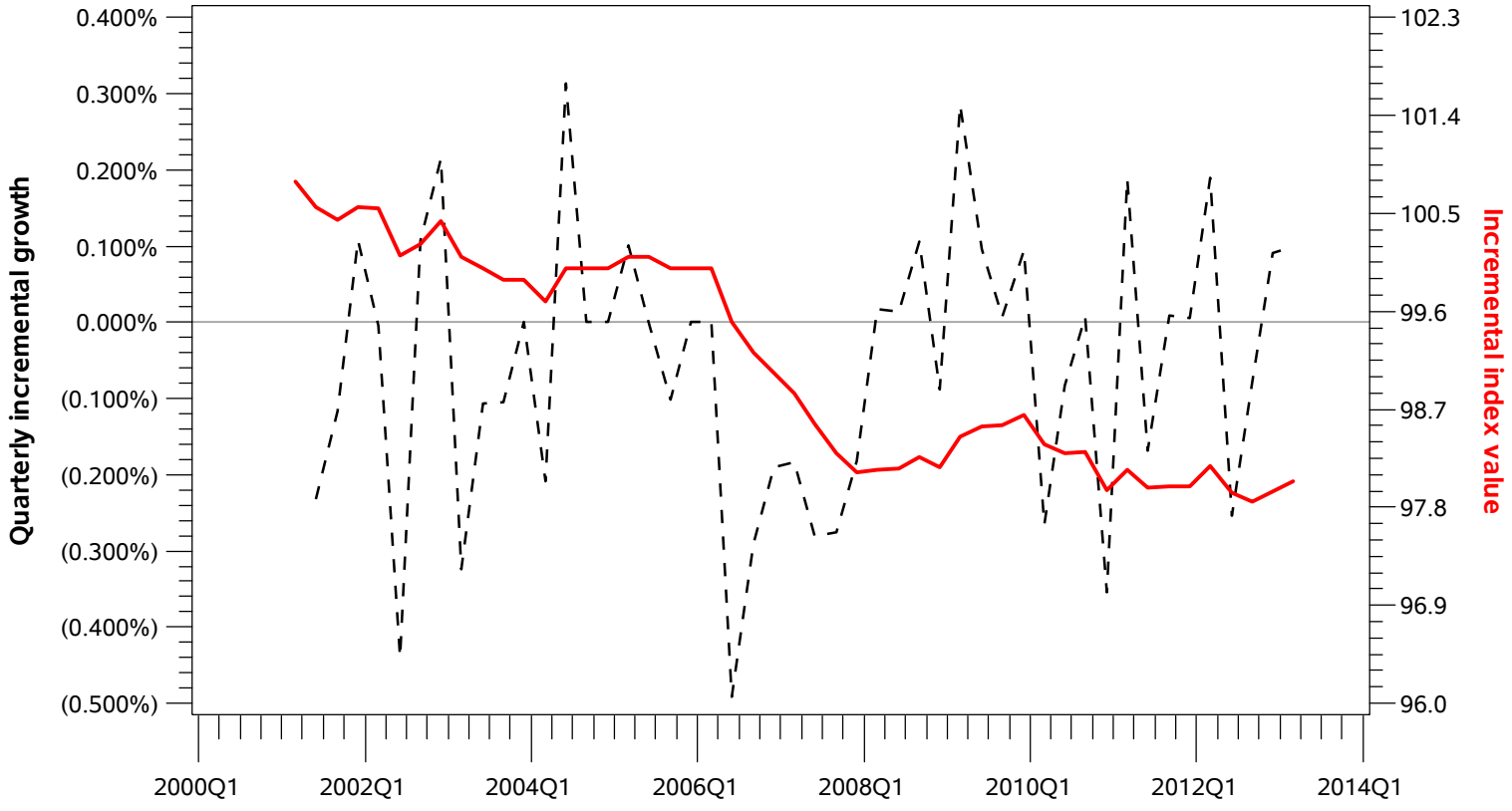


Table 18. Total Compensation, Private Industry: Transportation and material moving

LABSTAT series identifier: CIU2010000520000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-46.7496	Z_{Tau}	-6.5958
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0601	AR(1) coefficient	-0.0073
Standard error	0.0364	Standard error	0.1474
t-statistic	1.6520	t-statistic	-0.0498
Probability t	0.1053	Durbin-Watson	1.9796

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.240%

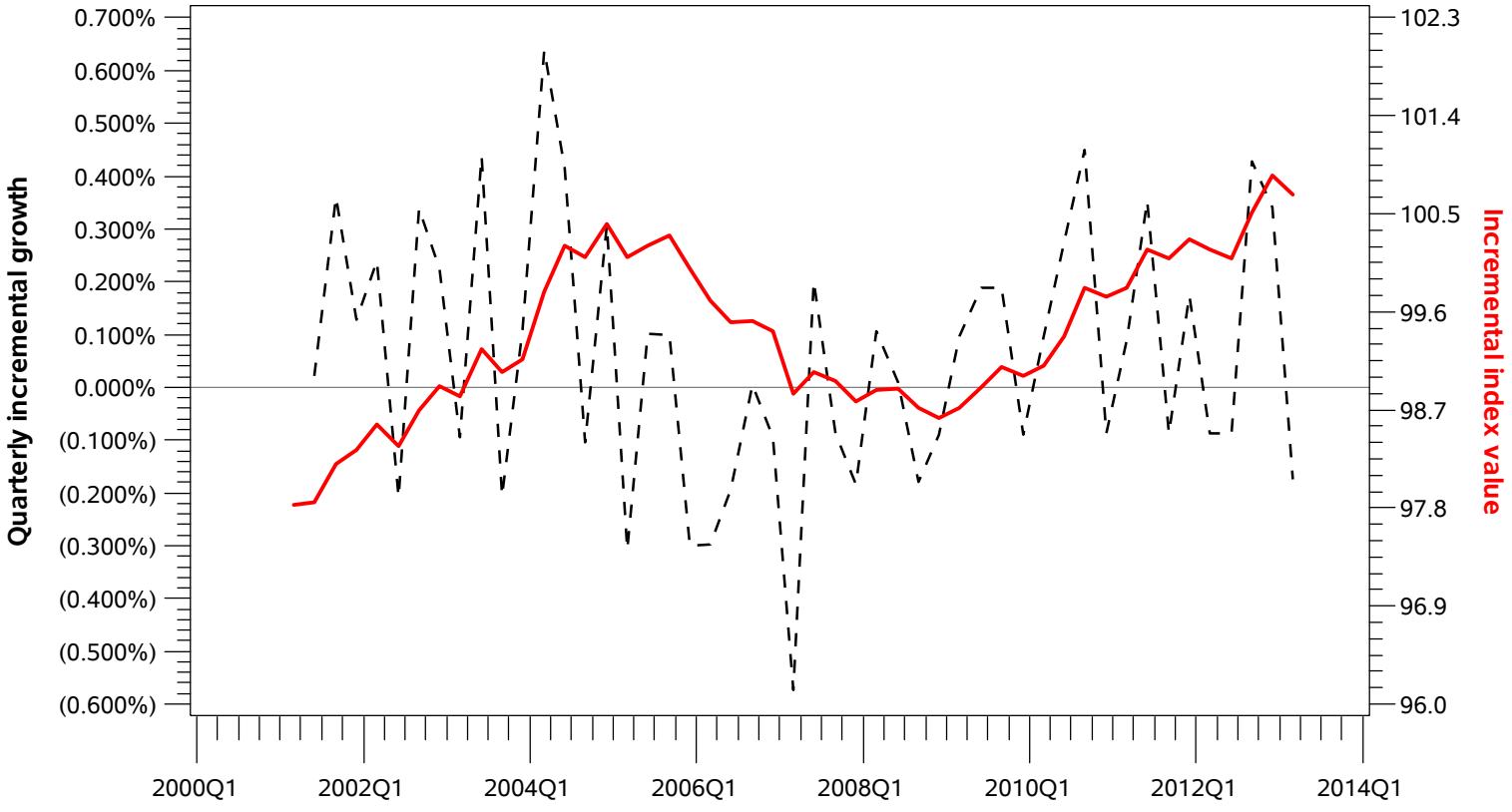


Table 19. Wages and Salaries, Private Industry: Transportation and material moving

LABSTAT series identifier: CIU2020000520000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-49.0905	Z_{Tau}	-7.0296
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	-0.0392	AR(1) coefficient	0.0496
Standard error	0.0325	Standard error	0.1473
t-statistic	-1.2063	t-statistic	0.3367
Probability t	0.2339	Durbin-Watson	2.0122

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: (0.157%)

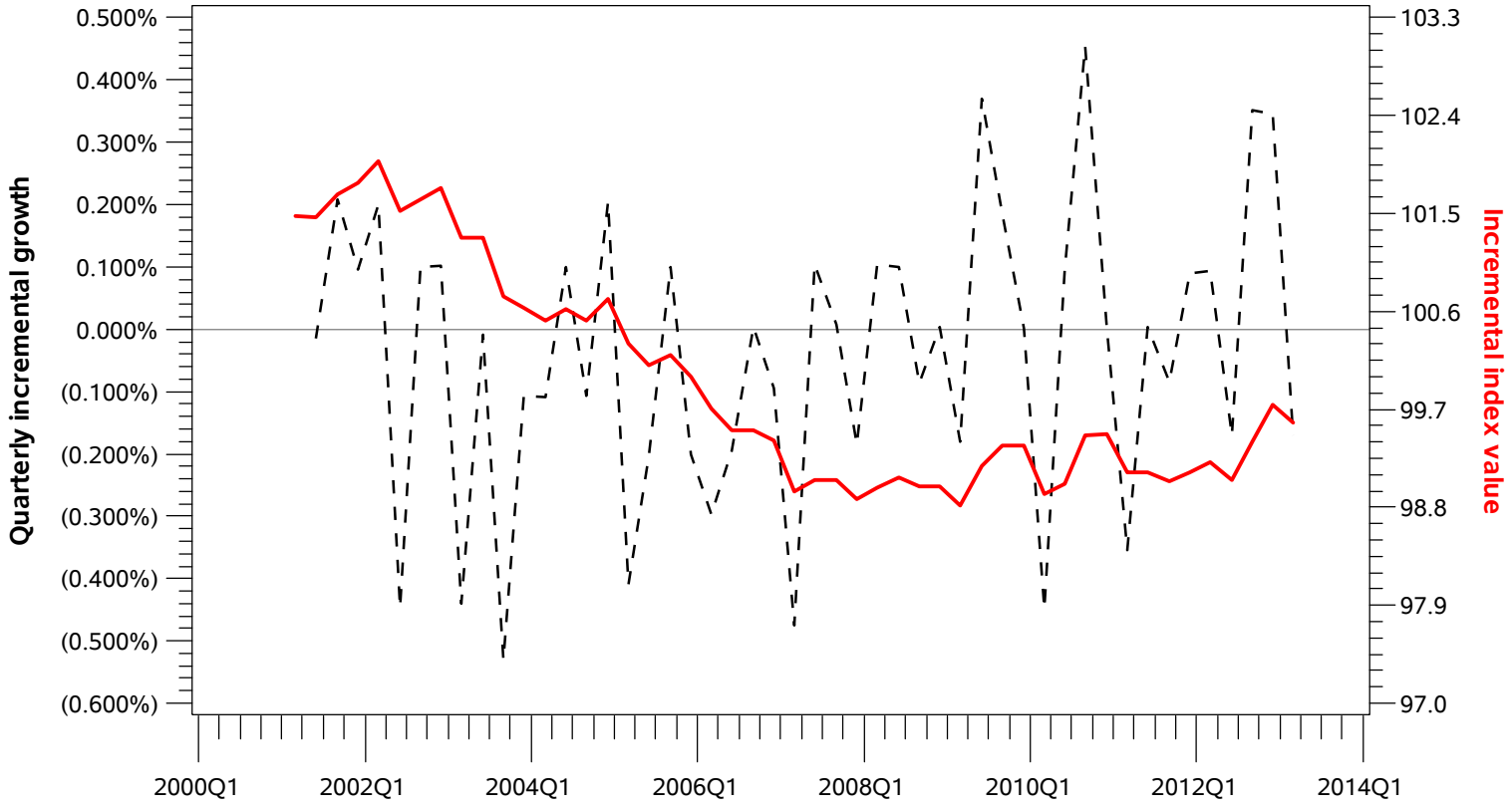


Table 20. Total Compensation, Private Industry: Service occupations

LABSTAT series identifier: CIU2010000300000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-128.3911	Z_{Tau}	-12.8137
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0201	AR(1) coefficient	0.1736
Standard error	0.0269	Standard error	0.0939
t-statistic	0.7451	t-statistic	1.8488
Probability t	0.4578	Durbin-Watson	1.9769

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.080%

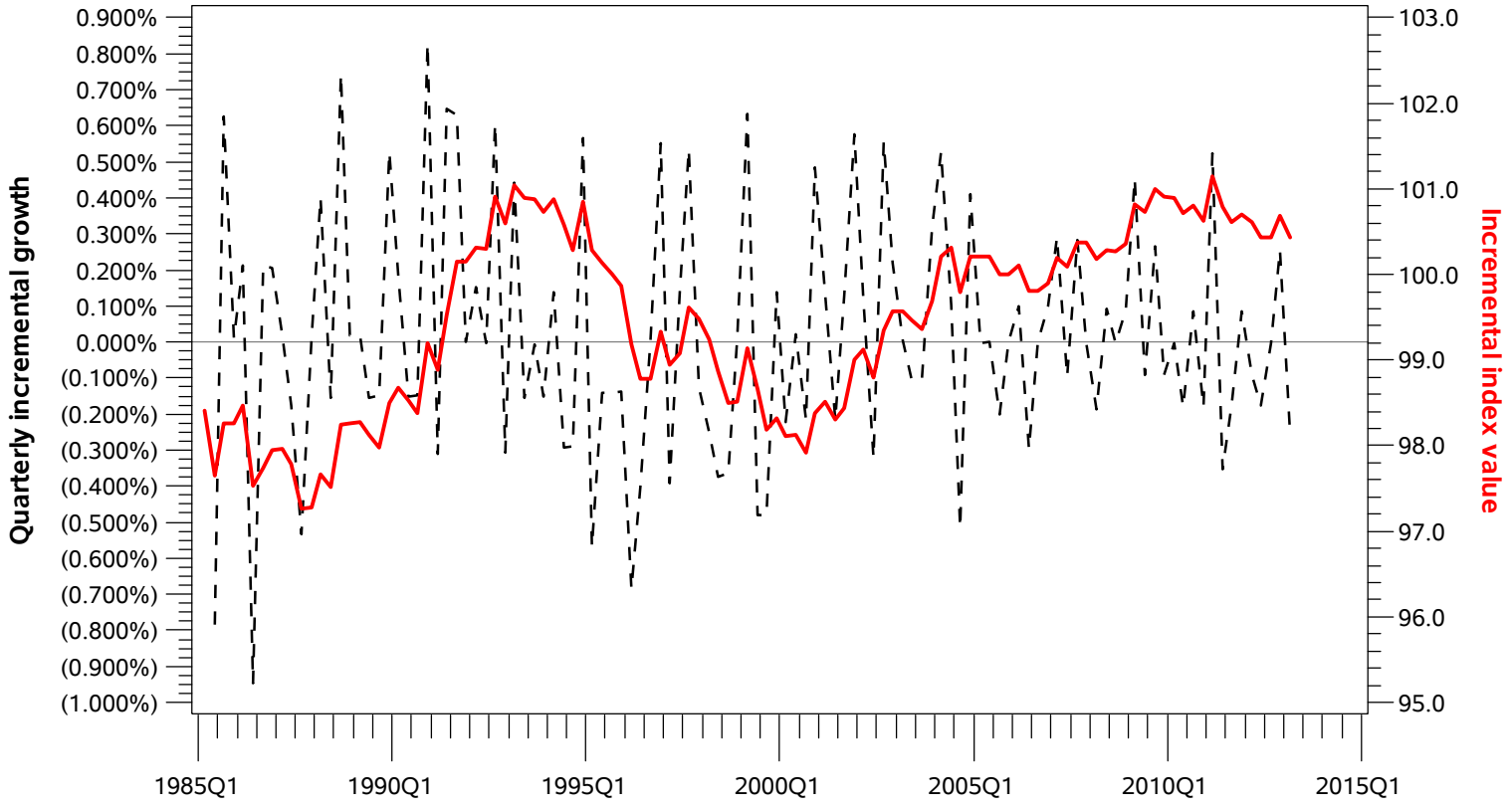


Table 21. Wages and Salaries, Private Industry: Service occupations

LABSTAT series identifier: CIU2020000300000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-123.0716	Z_{Tau}	-12.9706
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	-0.0541	AR(1) coefficient	0.1826
Standard error	0.0265	Standard error	0.0937
t-statistic	-2.0382	t-statistic	1.9479
Probability t	0.0439	Durbin-Watson	2.0358

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: (0.216%)

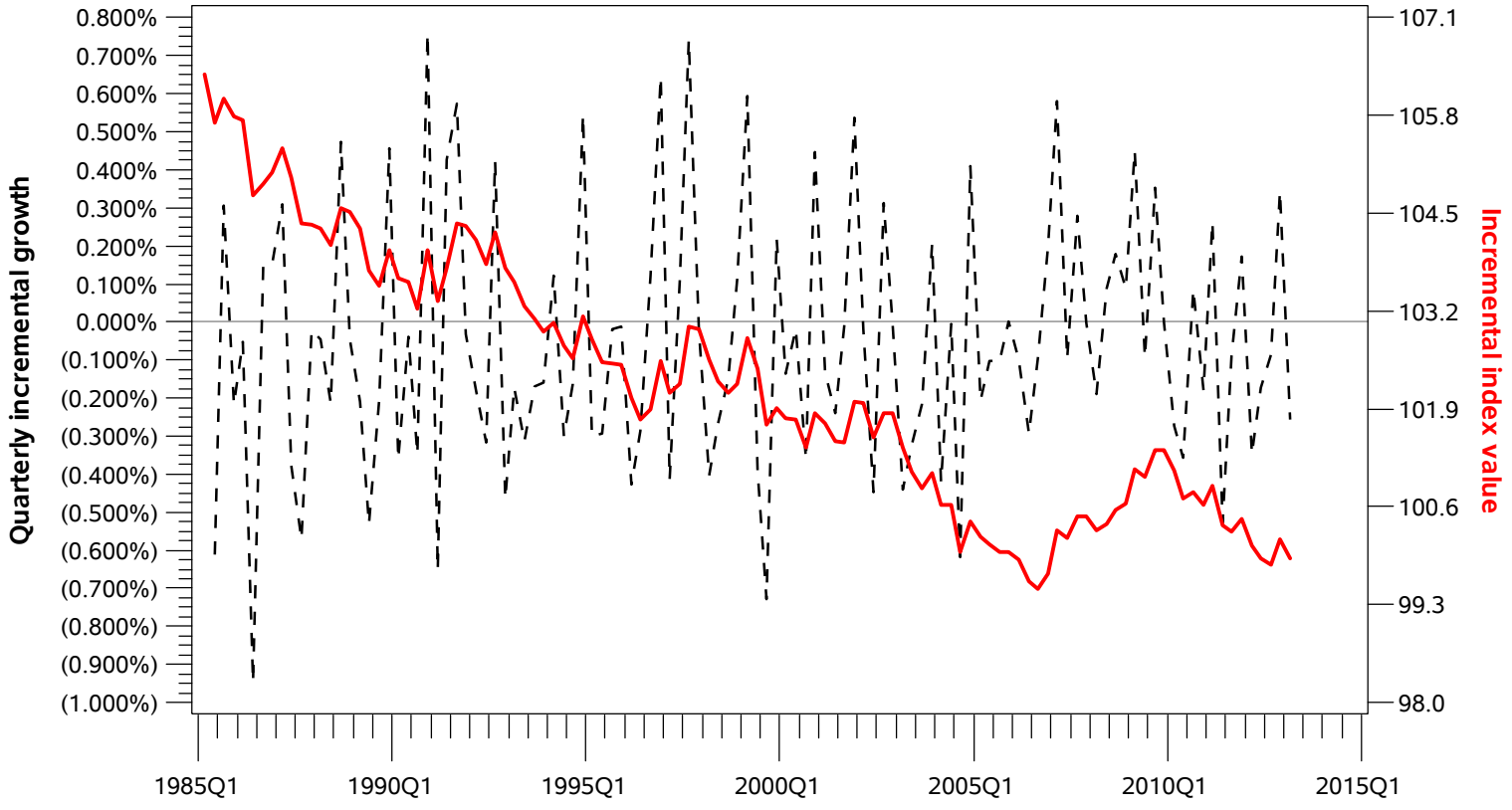


Table 22. Benefits, Private Industry: Service occupations

LABSTAT series identifier: CIU2030000300000I

Historical data period: SEP-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-75.8028	Z_{Tau}	-7.5796
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.2420	AR(1) coefficient	-0.3085
Standard error	0.0866	Standard error	0.0915
t-statistic	2.7941	t-statistic	-3.3699
Probability t	0.0062	Durbin-Watson	2.0625

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.971%

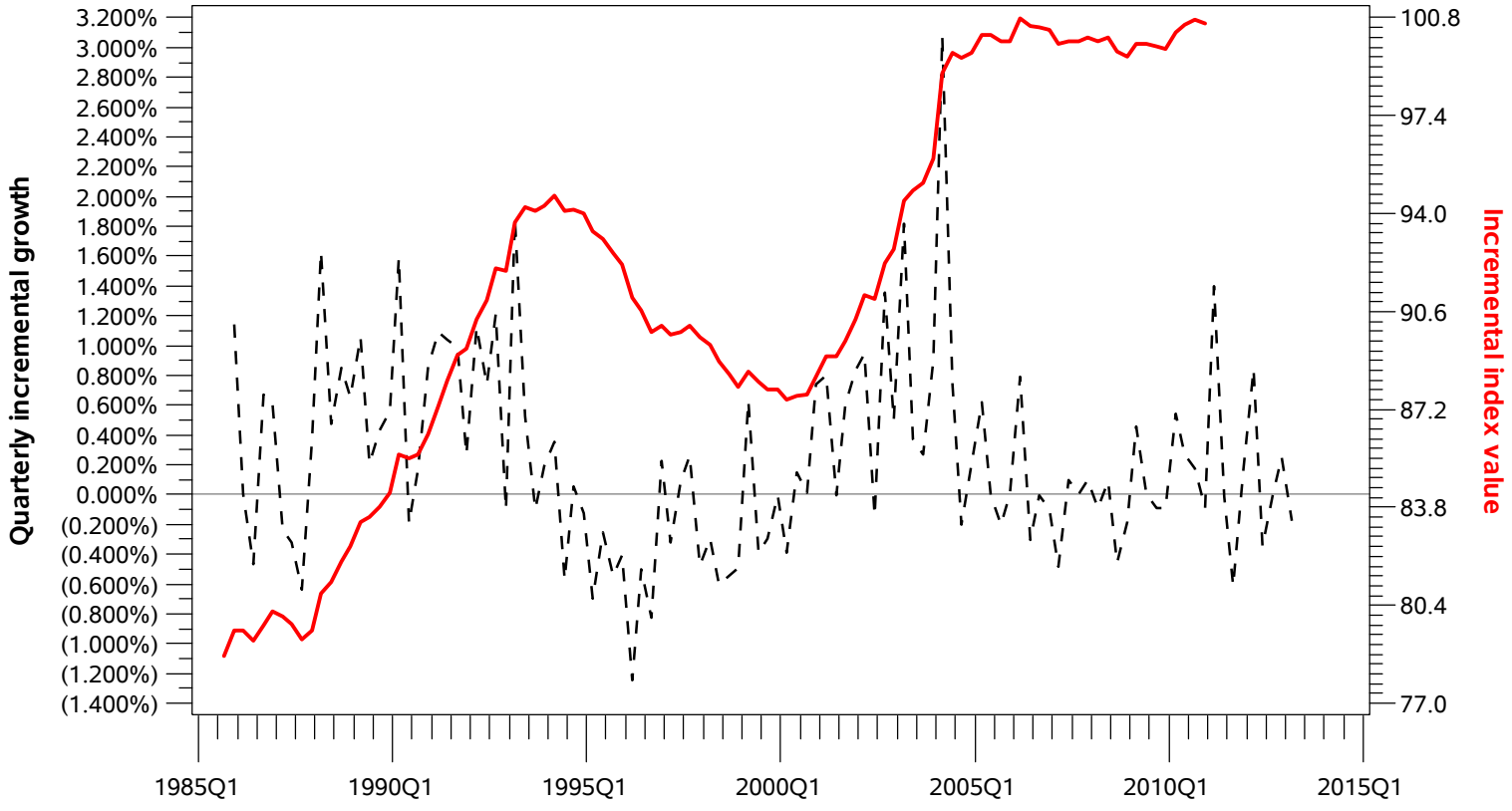


Table 23. Total Compensation, Private Industry: Goods-producing industries

LABSTAT series identifier: CIU201G000000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-81.3639	Z_{Tau}	-8.1315
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0324	AR(1) coefficient	-0.2455
Standard error	0.0408	Standard error	0.0924
t-statistic	0.7941	t-statistic	-2.6558
Probability t	0.4288	Durbin-Watson	1.9860

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.130%

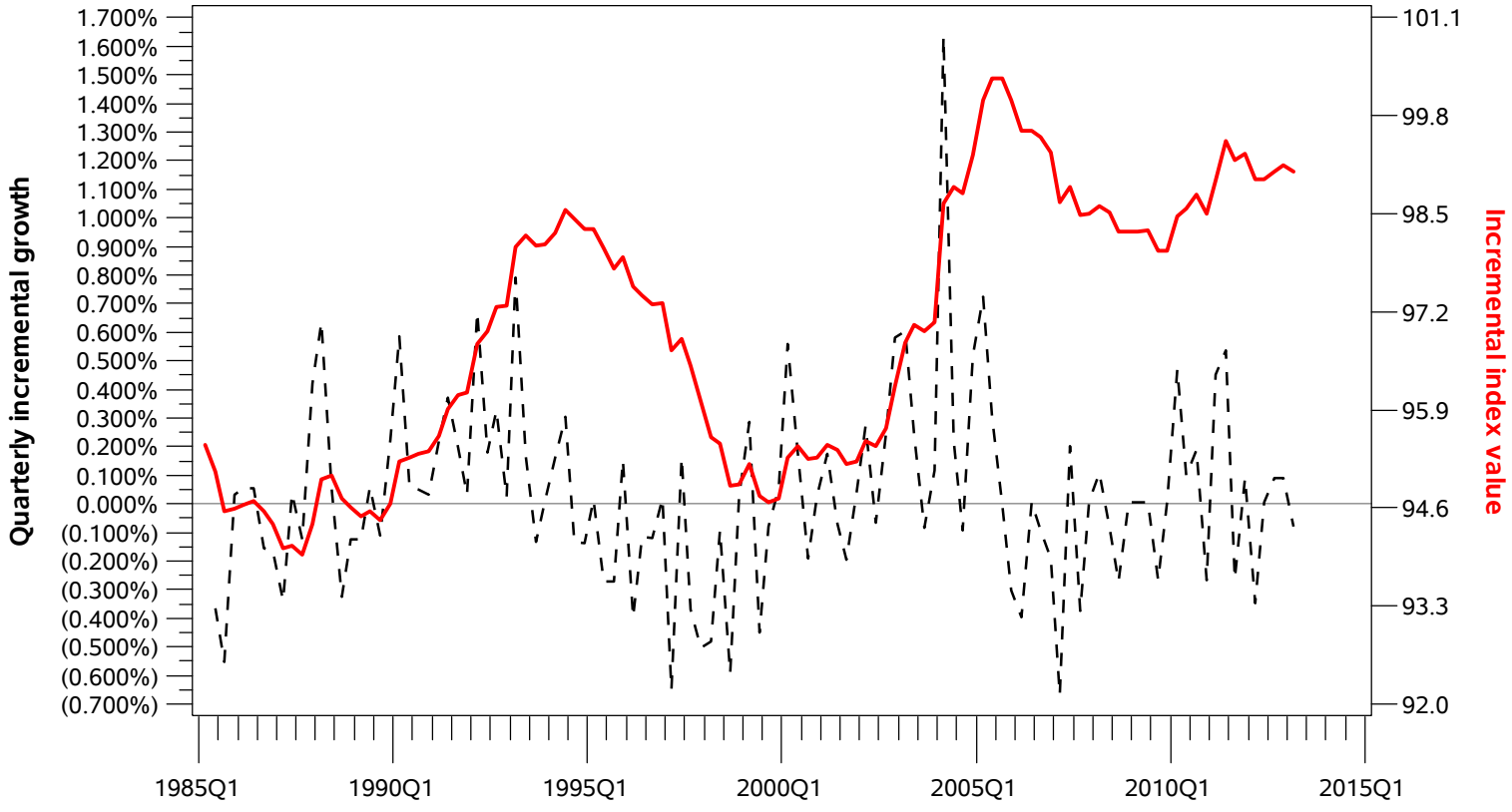


Table 24. Wages and Salaries, Private Industry: Goods-producing industries

LABSTAT series identifier: CIU202G000000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-140.7752	Z_{Tau}	-13.9267
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	-0.0456	AR(1) coefficient	0.2778
Standard error	0.0129	Standard error	0.0916
t-statistic	-3.5286	t-statistic	3.0335
Probability t	0.0006	Durbin-Watson	2.0152

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: (0.182%)

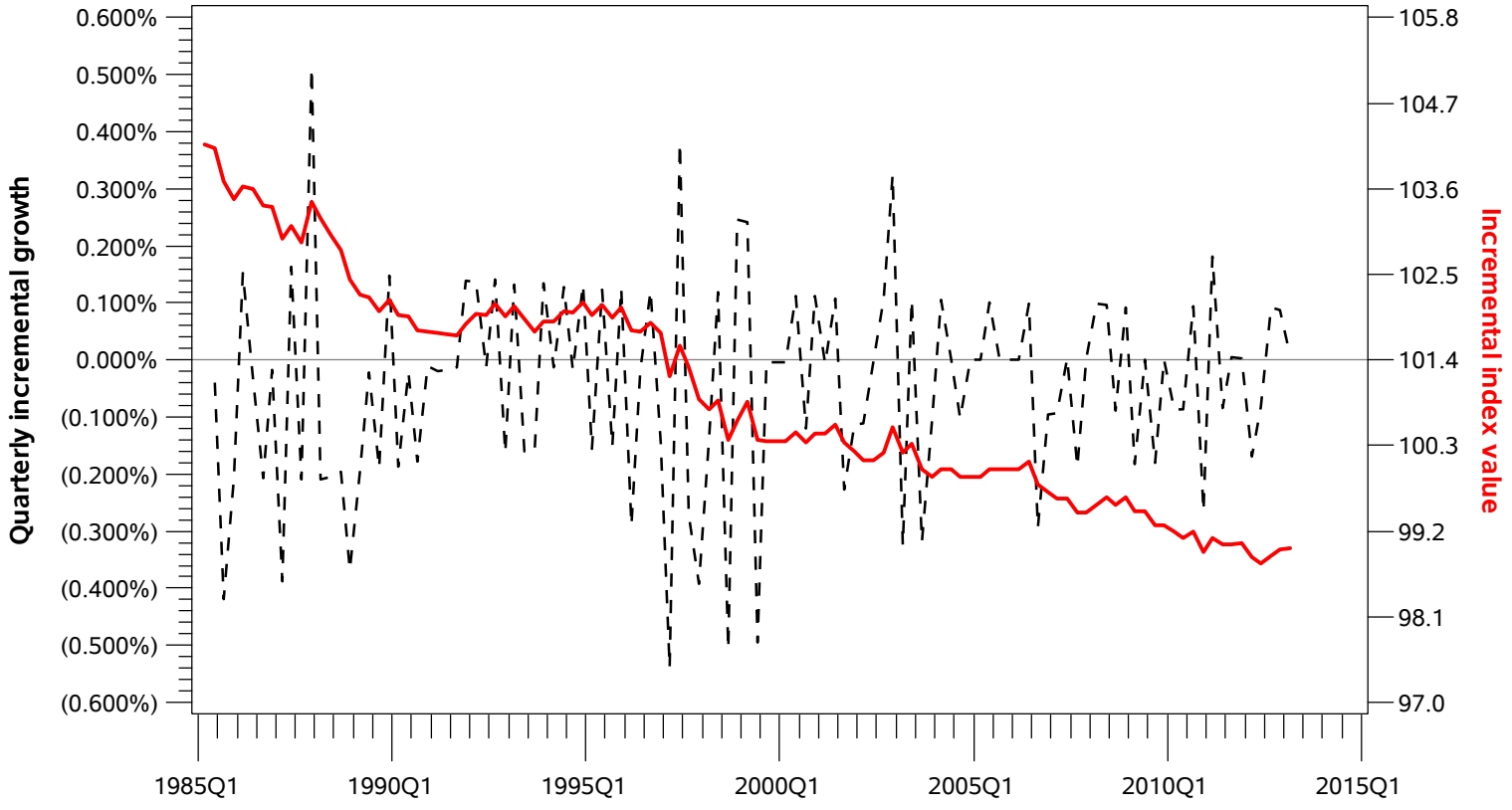


Table 25. Benefits, Private Industry: Goods-producing industries

LABSTAT series identifier: CIU203G000000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-83.6441	Z_{Tau}	-8.2134
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1903	AR(1) coefficient	-0.2460
Standard error	0.1086	Standard error	0.0924
t-statistic	1.7518	t-statistic	-2.6619
Probability t	0.0826	Durbin-Watson	2.0208

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.763%

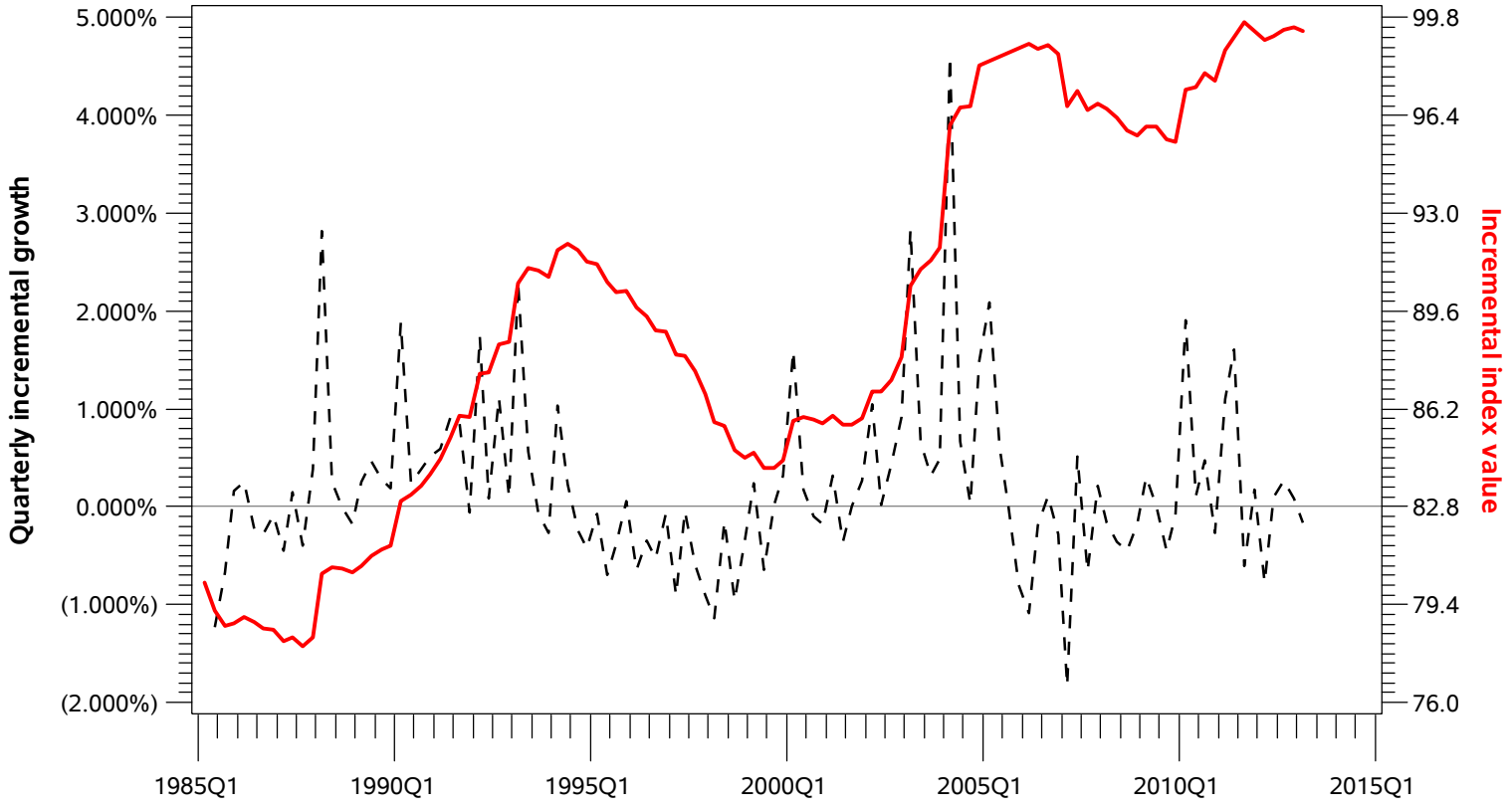


Table 26. Total Compensation, Private Industry: Construction

LABSTAT series identifier: CIU2012300000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-112.2647	Z_{Tau}	-11.0515
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0119	AR(1) coefficient	0.0529
Standard error	0.0347	Standard error	0.0952
t-statistic	0.3440	t-statistic	0.5553
Probability t	0.7315	Durbin-Watson	2.0101

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.048%

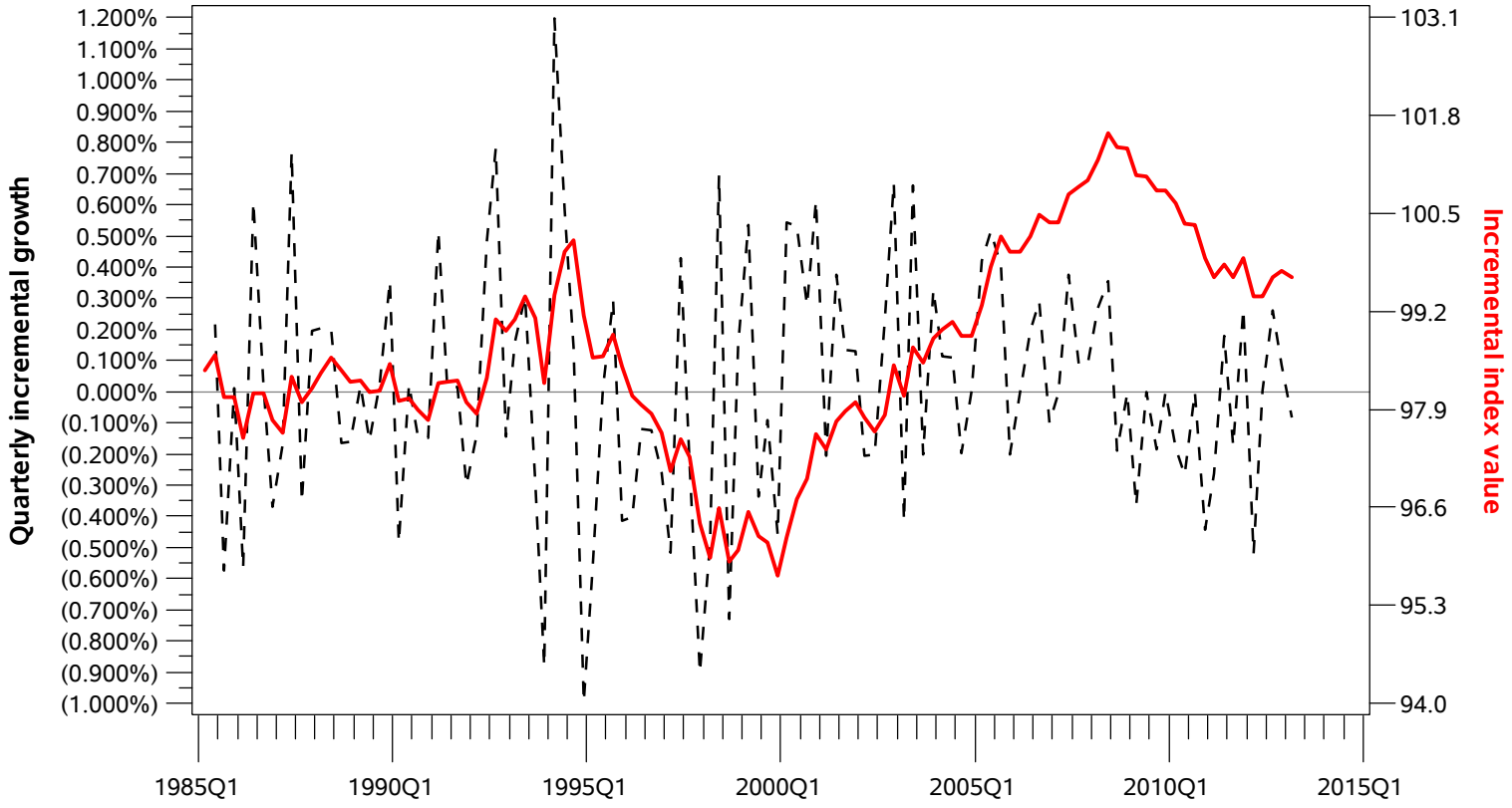


Table 27. Wages and Salaries, Private Industry: Construction

LABSTAT series identifier: CIU2022300000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-116.1882	Z_{Tau}	-11.4945
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	-0.0756	AR(1) coefficient	0.0930
Standard error	0.0294	Standard error	0.0949
t-statistic	-2.5678	t-statistic	0.9797
Probability t	0.0116	Durbin-Watson	2.0198

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: (0.302%)

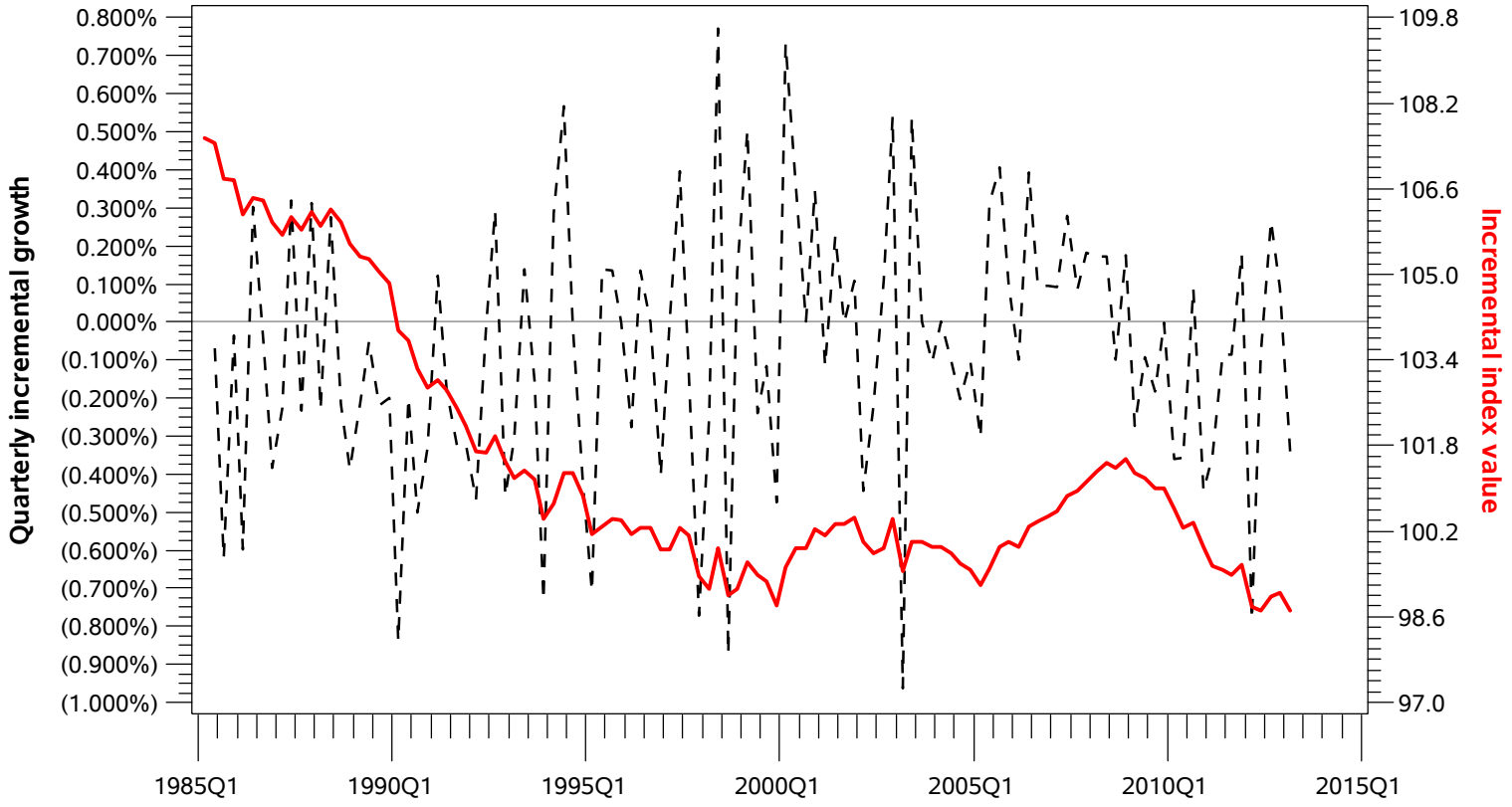


Table 28. Total Compensation, Private Industry: Manufacturing

LABSTAT series identifier: CIU2013000000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-92.2632	Z_{Tau}	-8.8755
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0372	AR(1) coefficient	-0.1639
Standard error	0.0465	Standard error	0.0941
t-statistic	0.7992	t-statistic	-1.7421
Probability t	0.4259	Durbin-Watson	1.9997

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.149%

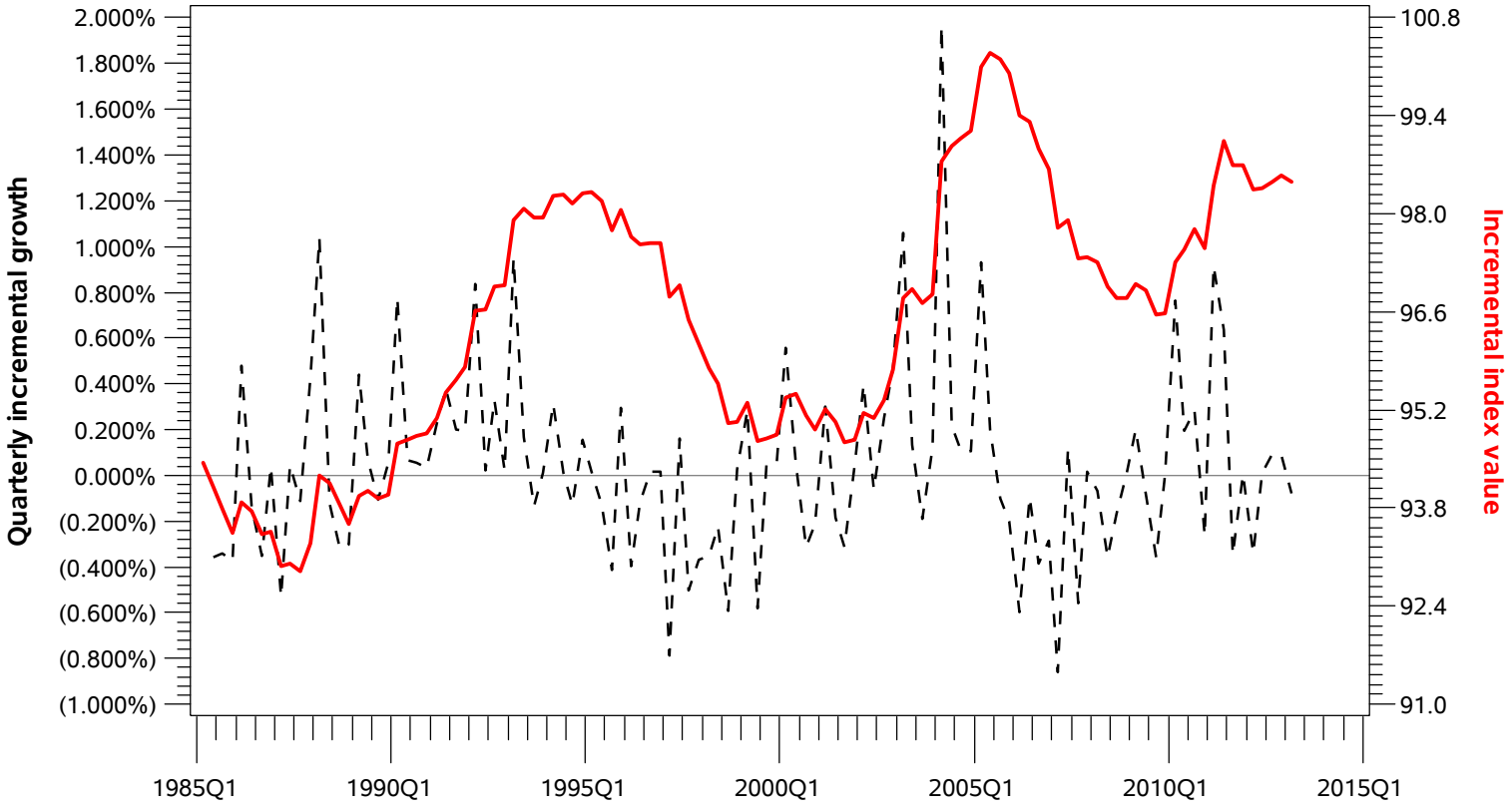


Table 29. Wages and Salaries, Private Industry: Manufacturing

LABSTAT series identifier: CIU2023000000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-128.7674	Z_{Tau}	-11.8740
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	-0.0370	AR(1) coefficient	0.1303
Standard error	0.0167	Standard error	0.0945
t-statistic	-2.2072	t-statistic	1.3783
Probability t	0.0294	Durbin-Watson	1.9724

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: (0.148%)

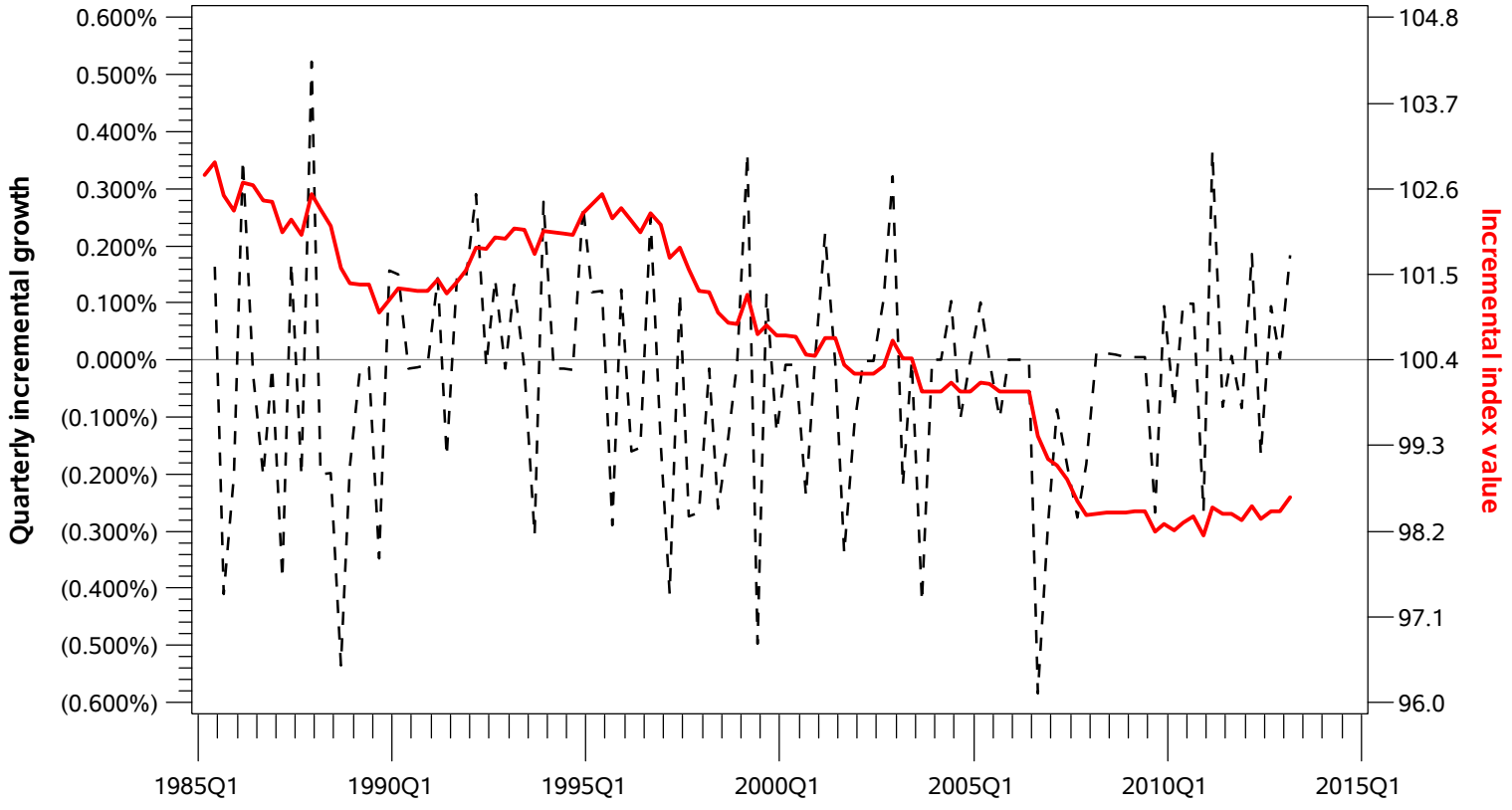


Table 30. Benefits, Private Industry: Manufacturing

LABSTAT series identifier: CIU2033000000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-95.2481	Z_{Tau}	-9.0072
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1884	AR(1) coefficient	-0.1546
Standard error	0.1203	Standard error	0.0942
t-statistic	1.5657	t-statistic	-1.6415
Probability t	0.1203	Durbin-Watson	2.0115

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.756%

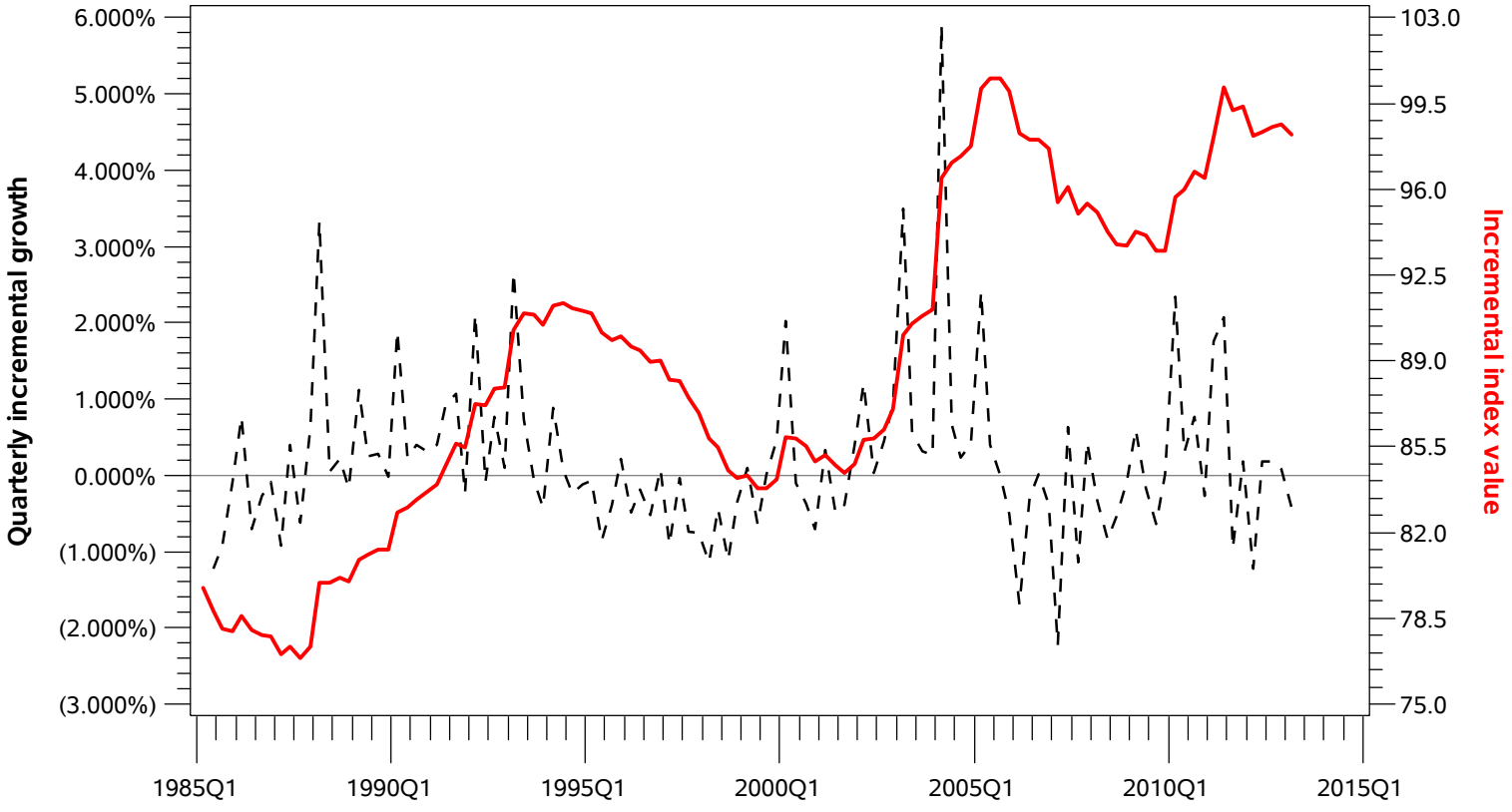


Table 31. Total Compensation, Private Industry: Service-providing industries

LABSTAT series identifier: CIU201S000000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-127.0656	Z_{Tau}	-11.2987
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0810	AR(1) coefficient	0.0880
Standard error	0.0161	Standard error	0.0950
t-statistic	5.0286	t-statistic	0.9269
Probability t	0.0000	Durbin-Watson	1.9615

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.325%

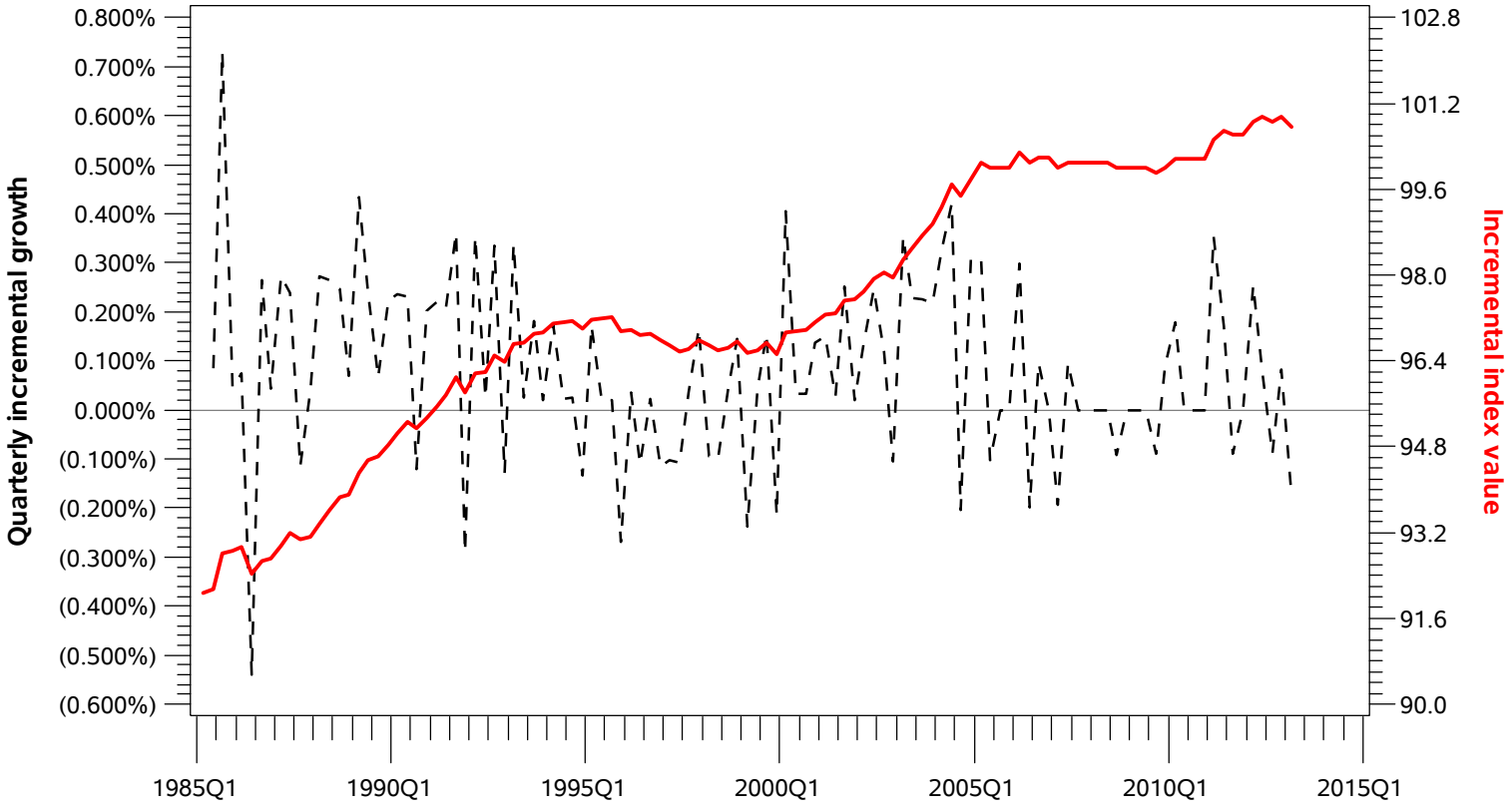


Table 32. Wages and Salaries, Private Industry: Service-providing industries

LABSTAT series identifier: CIU202S000000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-108.6408	Z_{Tau}	-11.1766
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0246	AR(1) coefficient	0.0501
Standard error	0.0121	Standard error	0.0952
t-statistic	2.0311	t-statistic	0.5261
Probability t	0.0447	Durbin-Watson	1.9862

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.098%

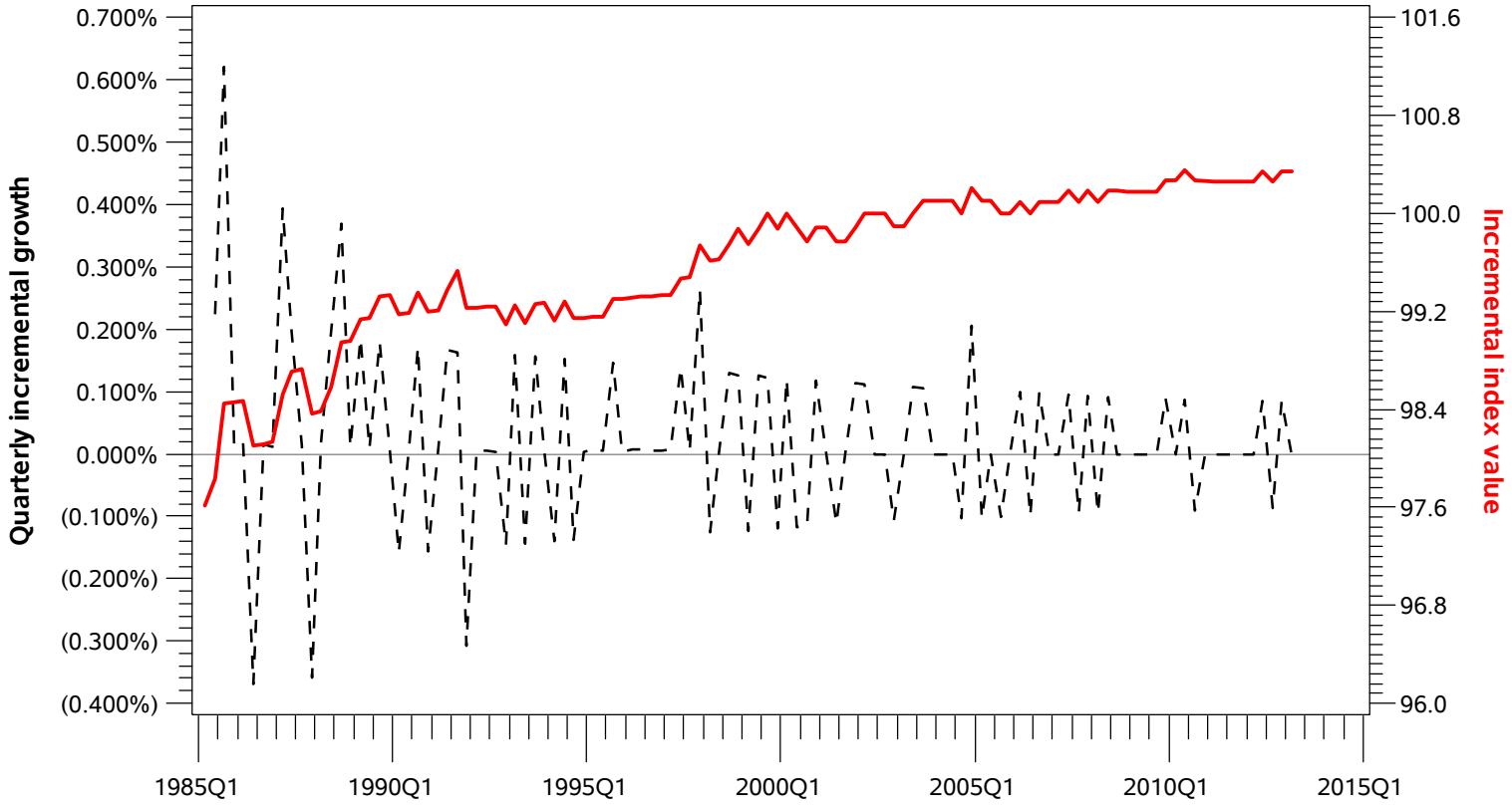


Table 33. Benefits, Private Industry: Service-providing industries

LABSTAT series identifier: CIU203S000000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-95.1243	Z_{Tau}	-8.8253
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.2232	AR(1) coefficient	-0.1643
Standard error	0.0564	Standard error	0.0940
t-statistic	3.9616	t-statistic	-1.7475
Probability t	0.0001	Durbin-Watson	2.0095

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.896%

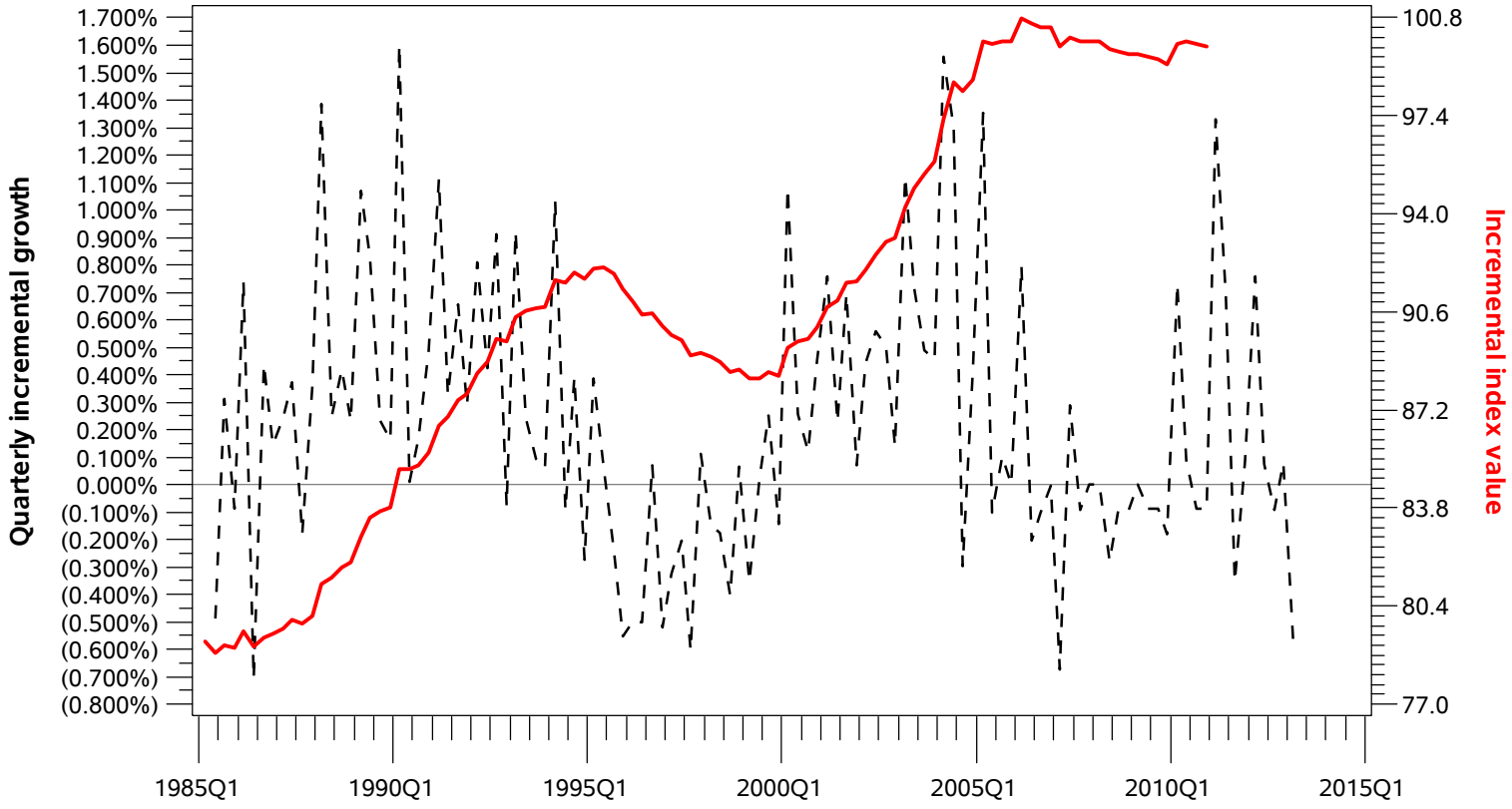


Table 34. Total Compensation, Private Industry: Trade, transportation, and utilities

LABSTAT series identifier: CIU2014000000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-55.3930	Z_{Tau}	-7.7580
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0463	AR(1) coefficient	0.1643
Standard error	0.0424	Standard error	0.1454
t-statistic	1.0913	t-statistic	1.1299
Probability t	0.2808	Durbin-Watson	1.9395

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.185%

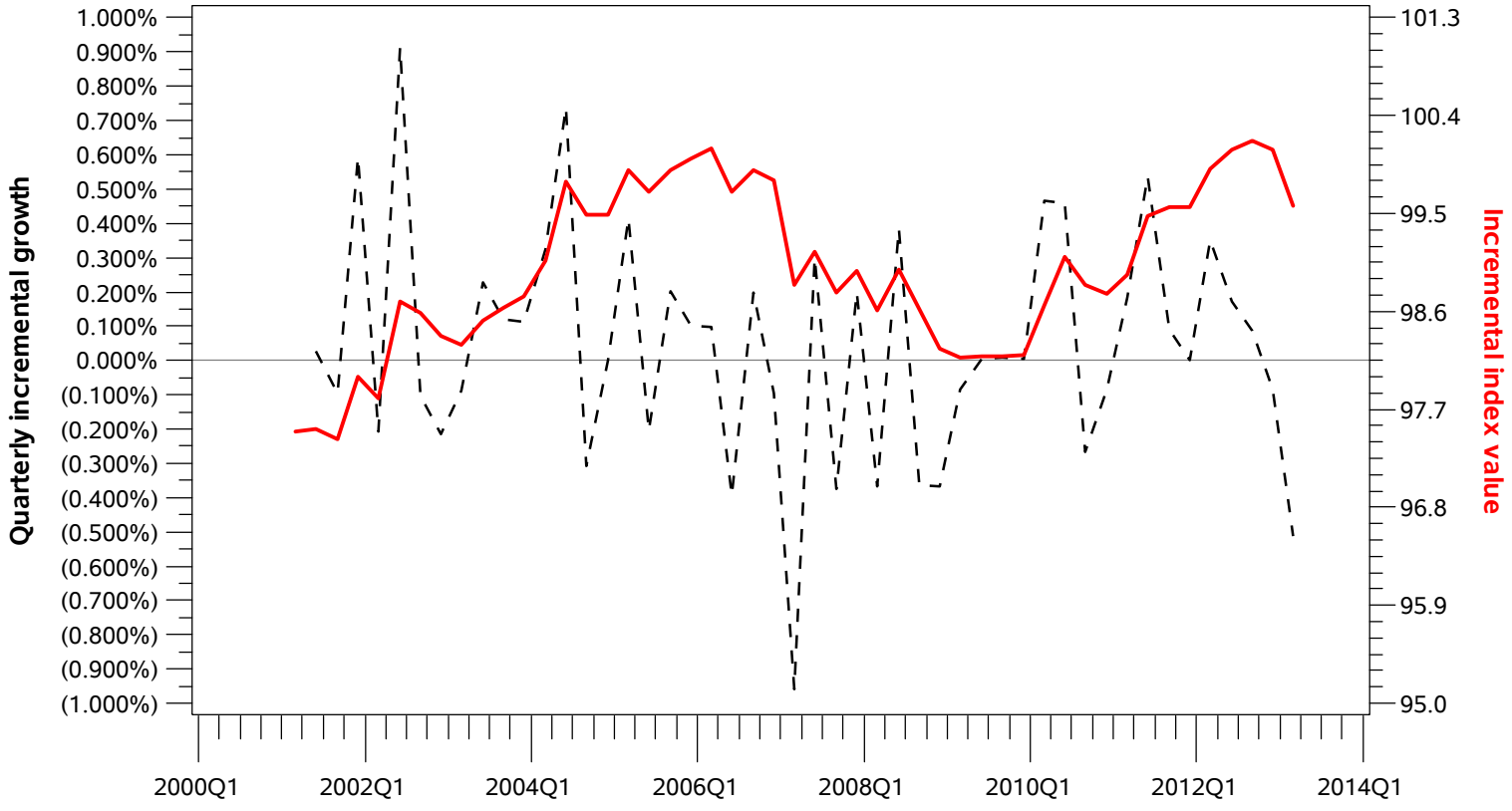


Table 35. Wages and Salaries, Private Industry: Trade, transportation, and utilities

LABSTAT series identifier: CIU2024000000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-67.1431	Z_{Tau}	-10.4007
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	-0.0417	AR(1) coefficient	0.4153
Standard error	0.0301	Standard error	0.1341
t-statistic	-1.3881	t-statistic	3.0965
Probability t	0.1718	Durbin-Watson	1.9499

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: (0.167%)

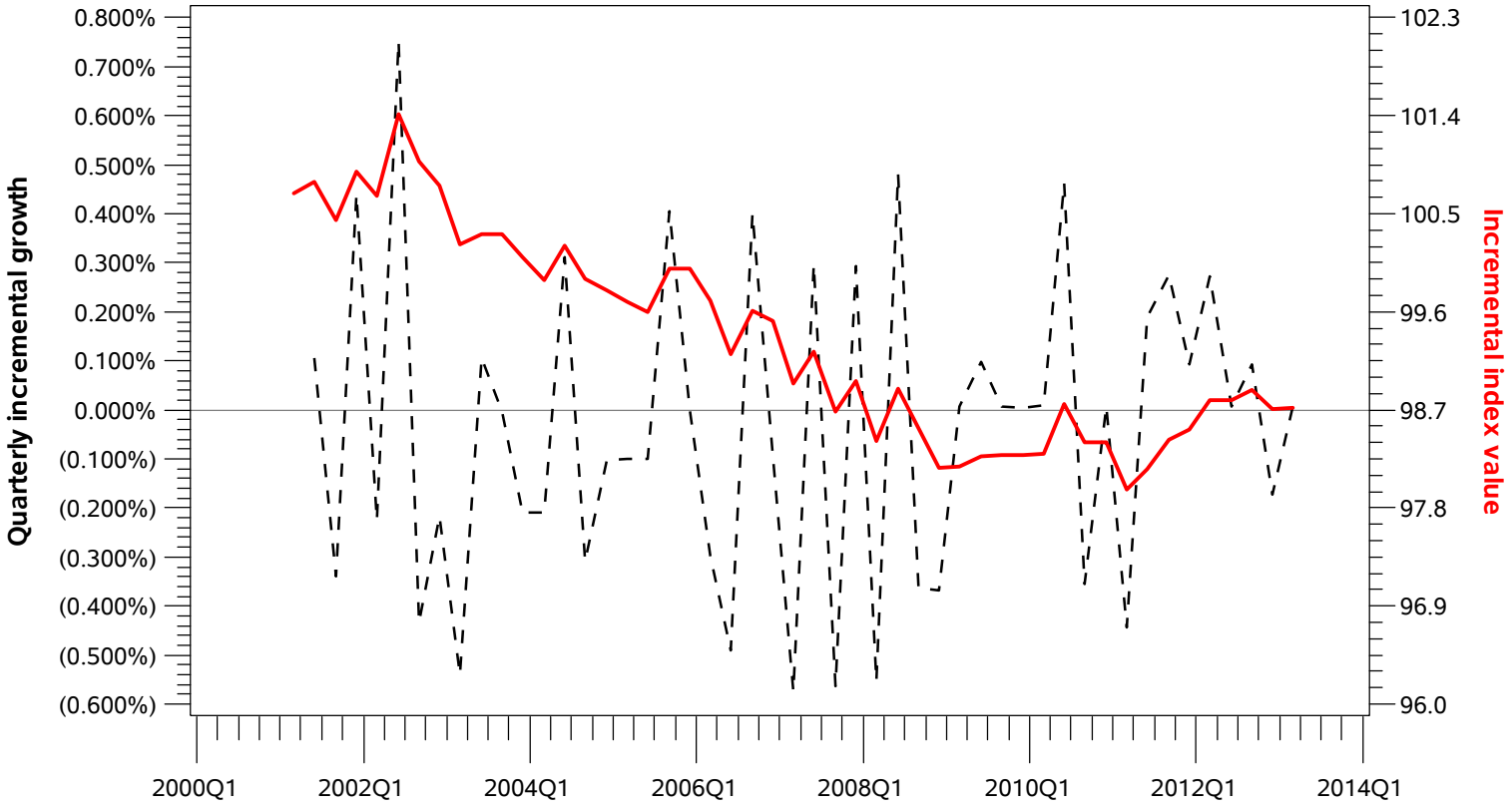


Table 36. Total Compensation, Private Industry: Transportation and warehousing

LABSTAT series identifier: CIU2014300000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-125.3562	Z_{Tau}	-11.5822
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	-0.0130	AR(1) coefficient	0.1088
Standard error	0.0421	Standard error	0.0948
t-statistic	-0.3084	t-statistic	1.1479
Probability t	0.7583	Durbin-Watson	1.9830

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: (0.052%)

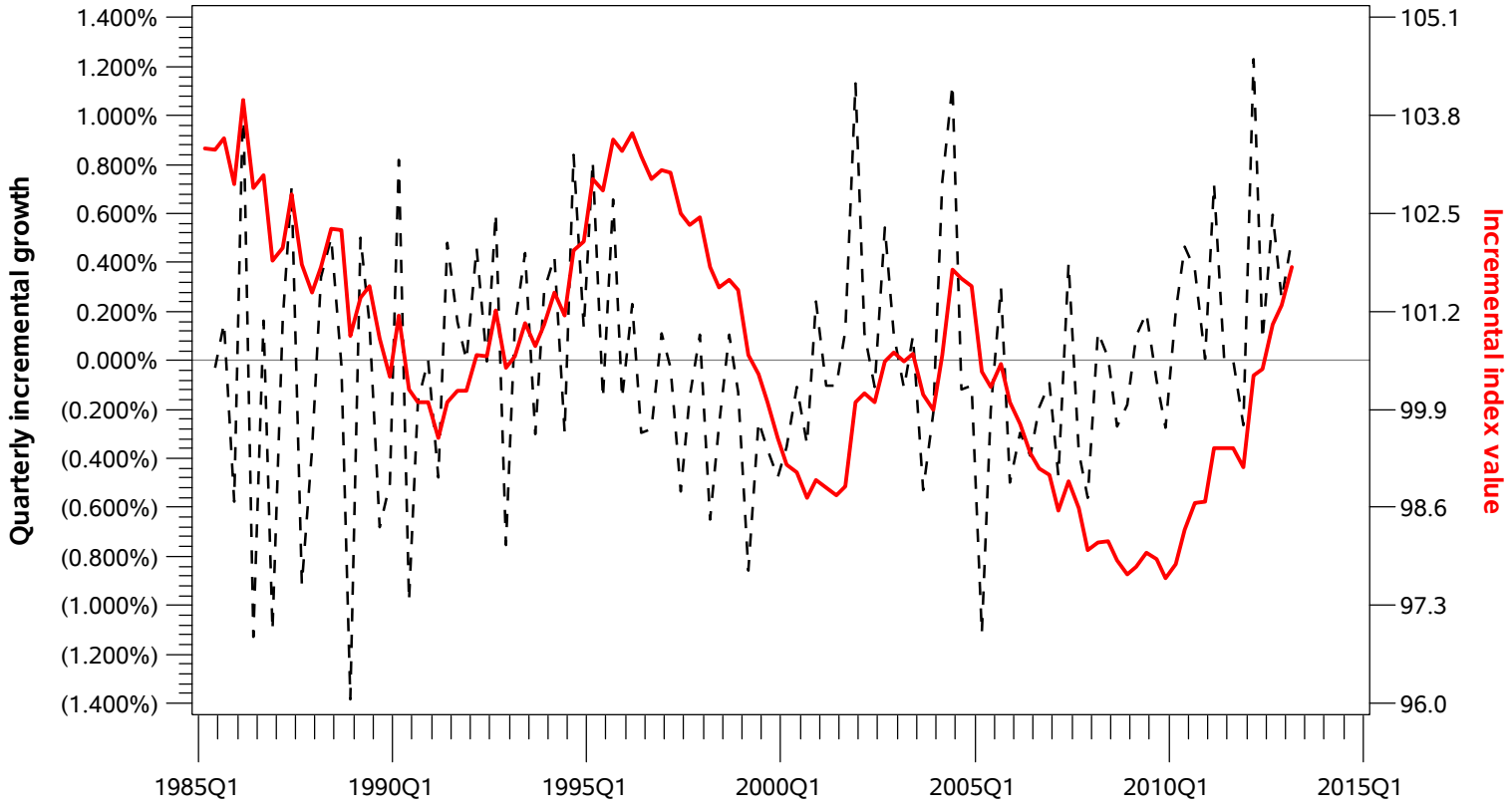


Table 37. Wages and Salaries, Private Industry: Transportation and warehousing

LABSTAT series identifier: CIU2024300000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-106.6178	Z_{Tau}	-9.8113
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	-0.1282	AR(1) coefficient	-0.0594
Standard error	0.0495	Standard error	0.0952
t-statistic	-2.5904	t-statistic	-0.6240
Probability t	0.0109	Durbin-Watson	1.9933

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: (0.512%)

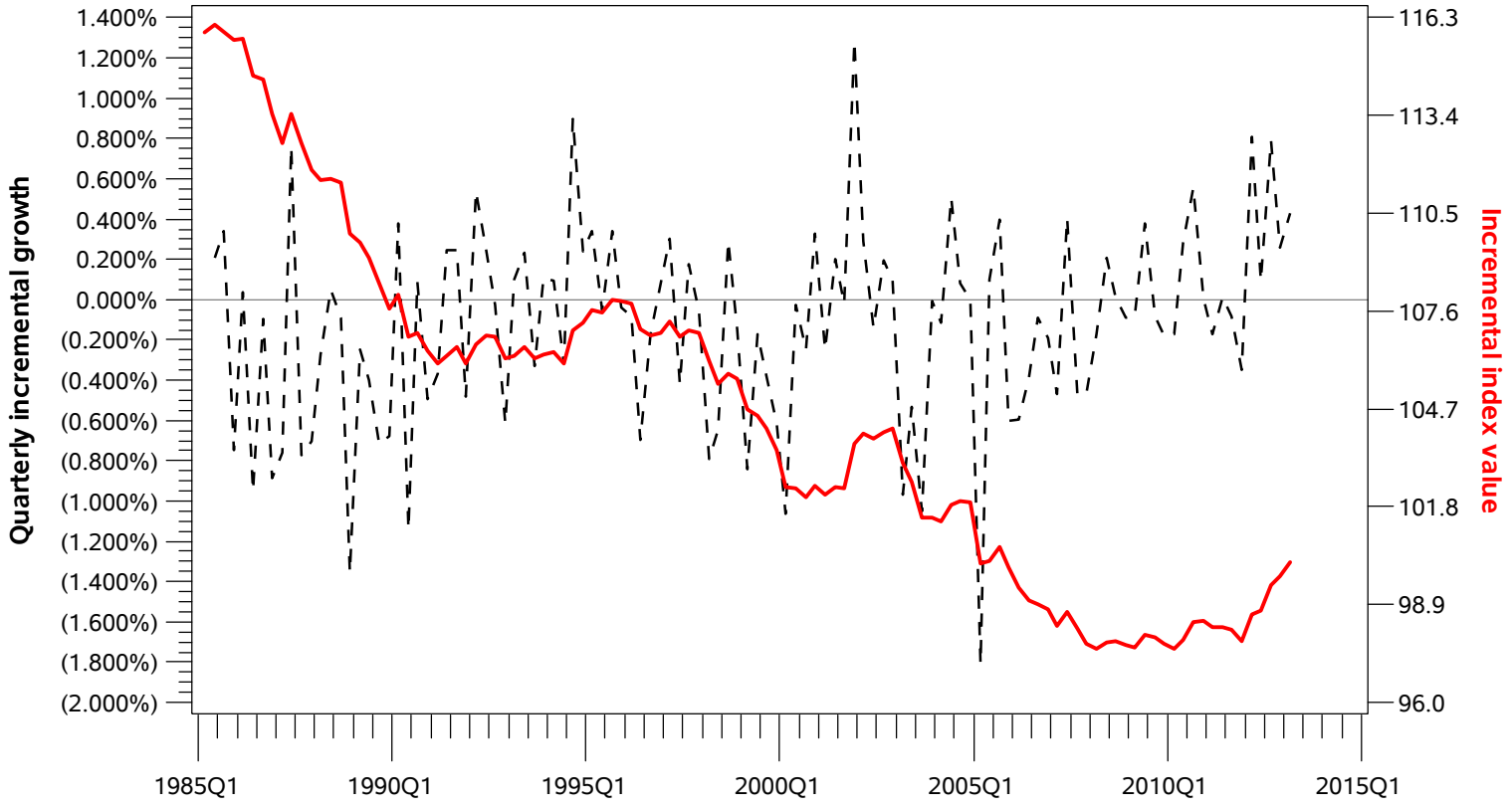


Table 38. Total Compensation, Private Industry: Utilities

LABSTAT series identifier: CIU2014400000000I

Historical data period: DEC-1987 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-99.5756	Z_{Tau}	-10.0592
Prob Z_{Rho}	0.0009	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1225	AR(1) coefficient	0.0369
Standard error	0.0999	Standard error	0.1025
t-statistic	1.2258	t-statistic	0.3599
Probability t	0.2233	Durbin-Watson	1.9961

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.491%

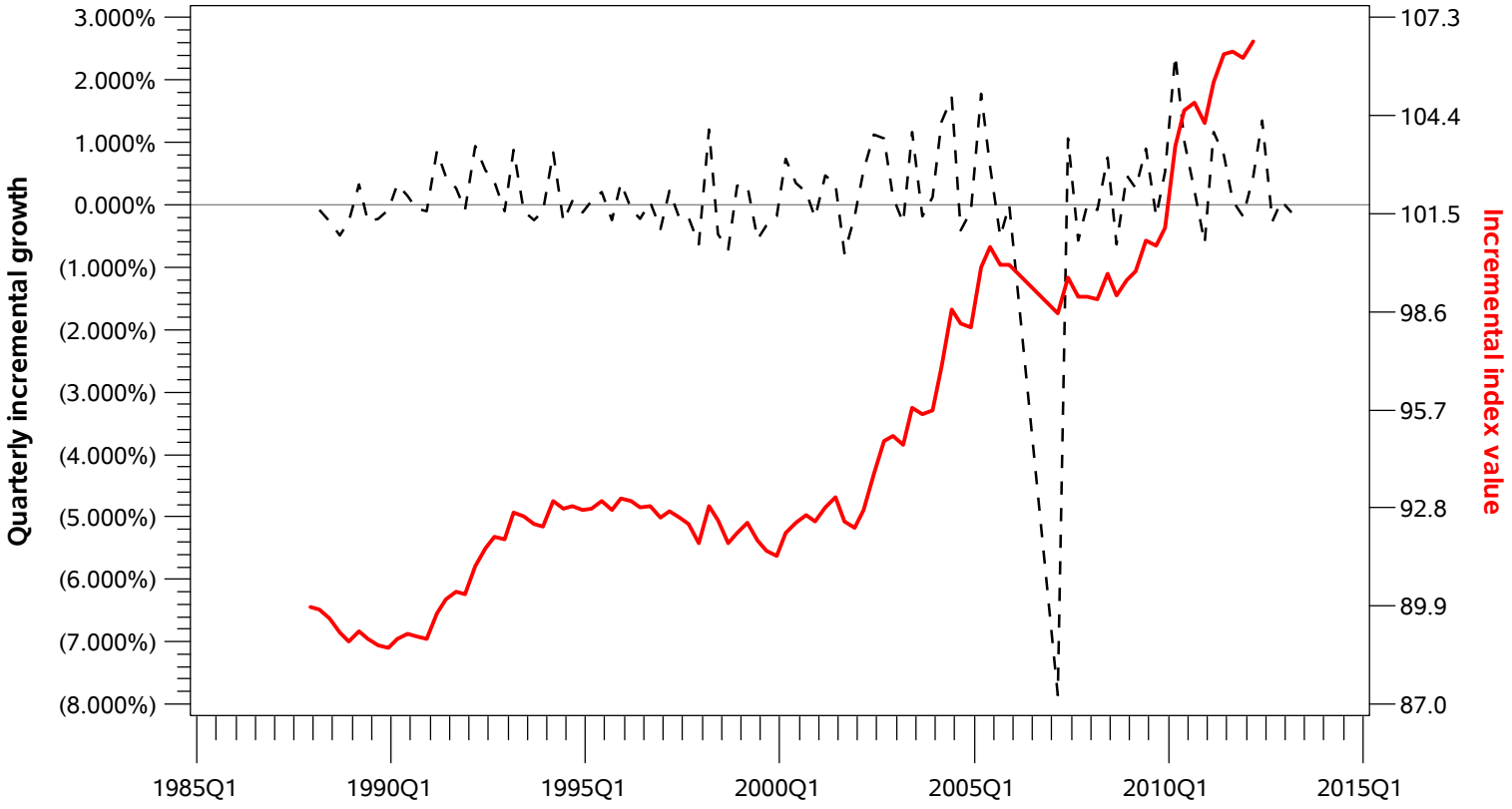


Table 39. Wages and Salaries, Private Industry: Utilities

LABSTAT series identifier: CIU2024400000000I

Historical data period: DEC-1987 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-101.7017	Z_{Tau}	-10.1172
Prob Z_{Rho}	0.0009	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0395	AR(1) coefficient	0.0257
Standard error	0.0335	Standard error	0.1005
t-statistic	1.1782	t-statistic	0.2557
Probability t	0.2415	Durbin-Watson	1.9908

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.158%

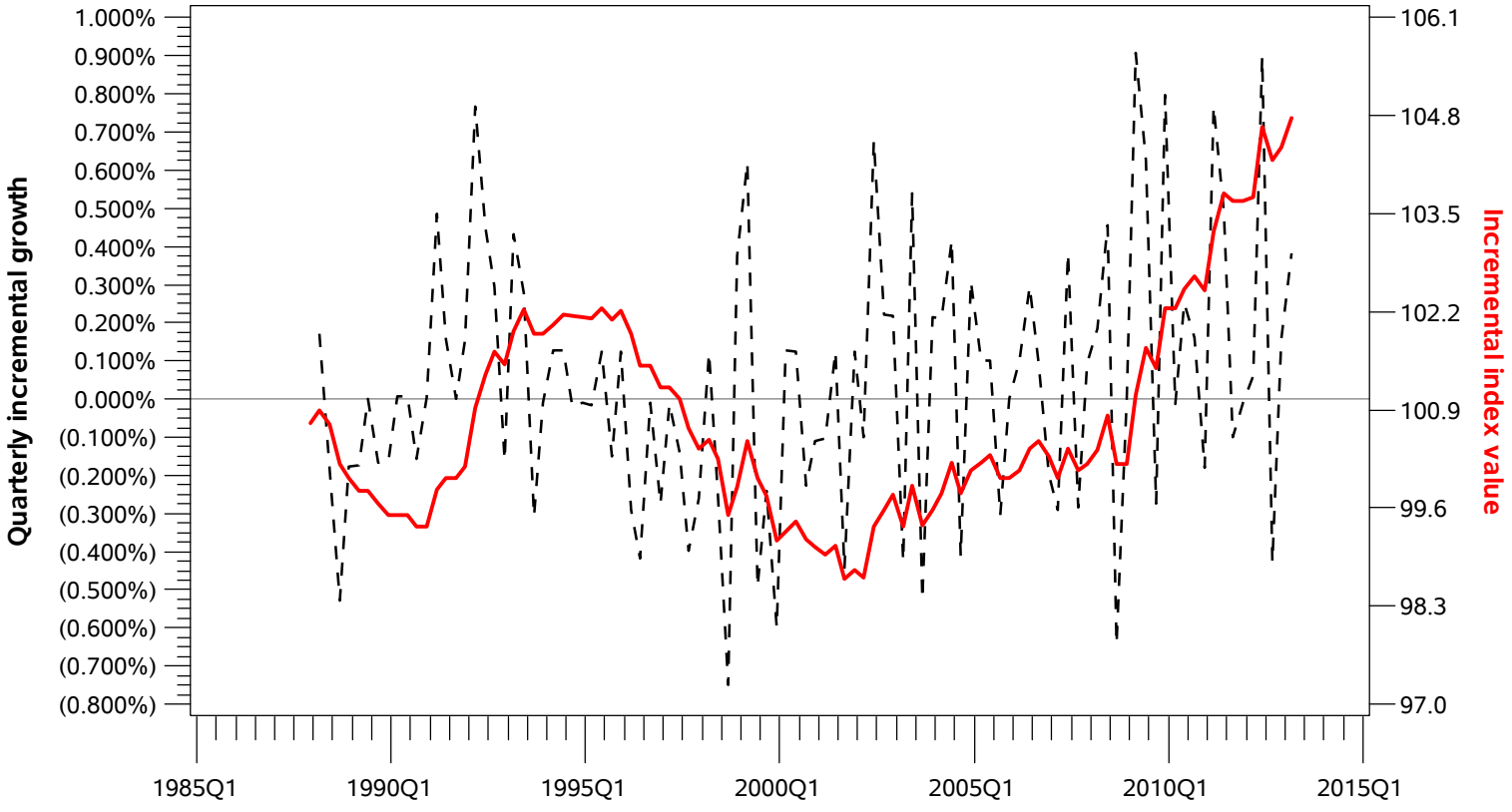


Table 40. Total Compensation, Private Industry: Wholesale trade

LABSTAT series identifier: CIU2014110000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-58.4403	Z_{Tau}	-8.7423
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0333	AR(1) coefficient	0.2386
Standard error	0.0667	Standard error	0.1432
t-statistic	0.4992	t-statistic	1.6663
Probability t	0.6200	Durbin-Watson	1.9440

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.133%

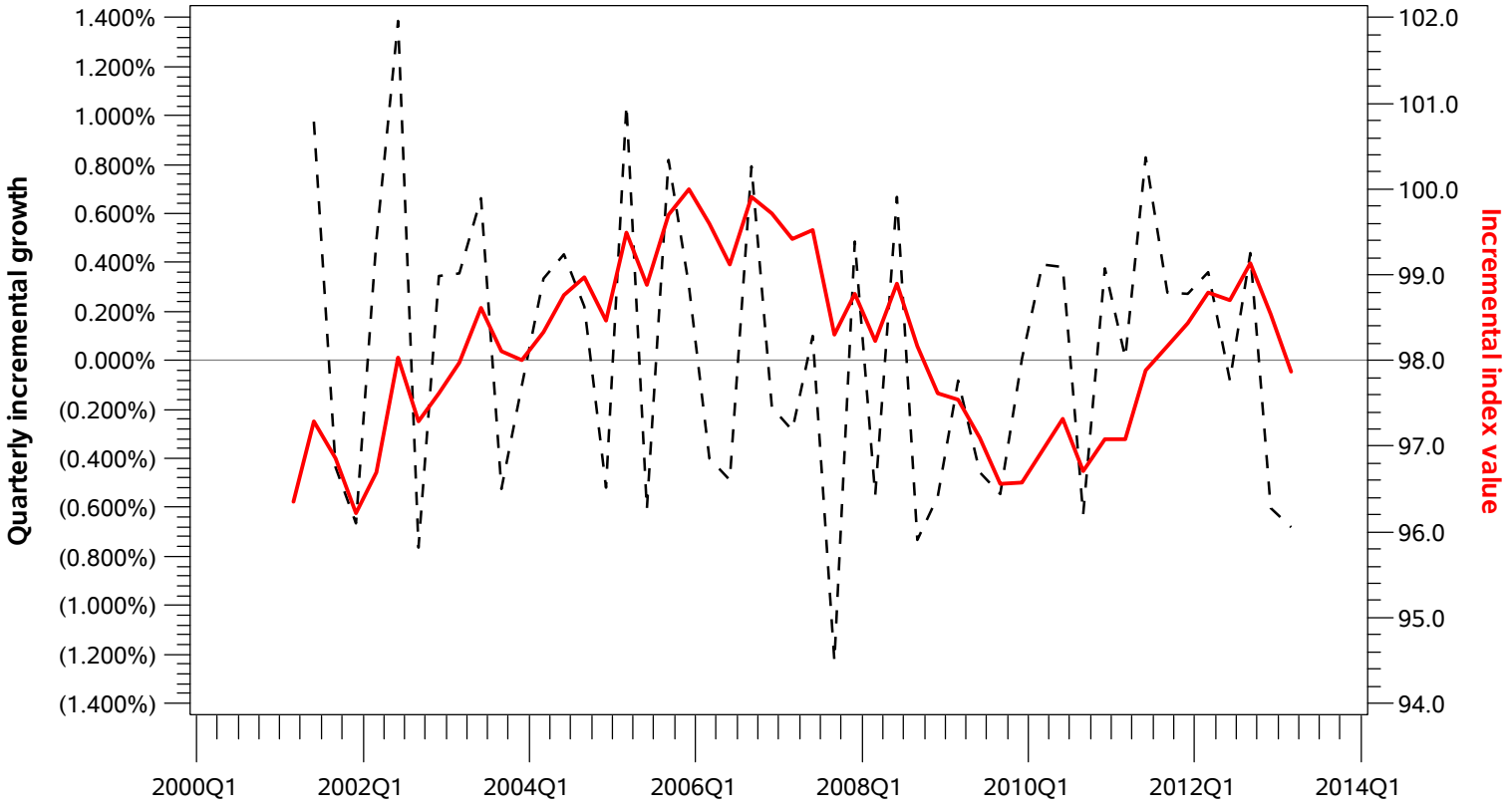


Table 41. Wages and Salaries, Private Industry: Wholesale trade

LABSTAT series identifier: CIU2024110000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-64.5077	Z_{Tau}	-10.3881
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	-0.0790	AR(1) coefficient	0.3788
Standard error	0.0719	Standard error	0.1365
t-statistic	-1.0987	t-statistic	2.7761
Probability t	0.2776	Durbin-Watson	2.0297

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: (0.316%)

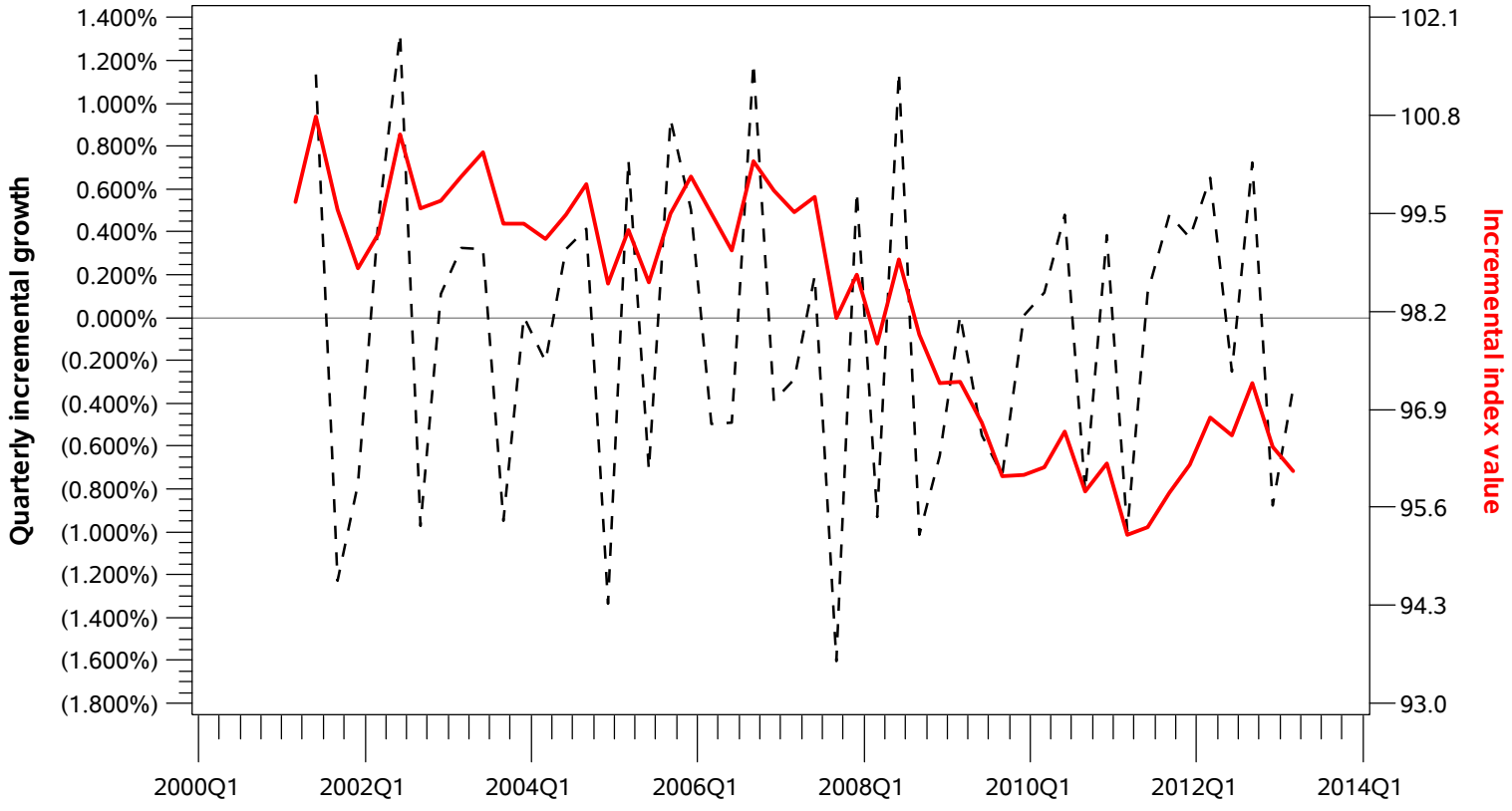


Table 42. Total Compensation, Private Industry: Retail trade

LABSTAT series identifier: CIU2014120000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-57.0303	Z_{Tau}	-8.0395
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0173	AR(1) coefficient	0.2004
Standard error	0.0505	Standard error	0.1445
t-statistic	0.3436	t-statistic	1.3875
Probability t	0.7327	Durbin-Watson	1.9651

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.069%

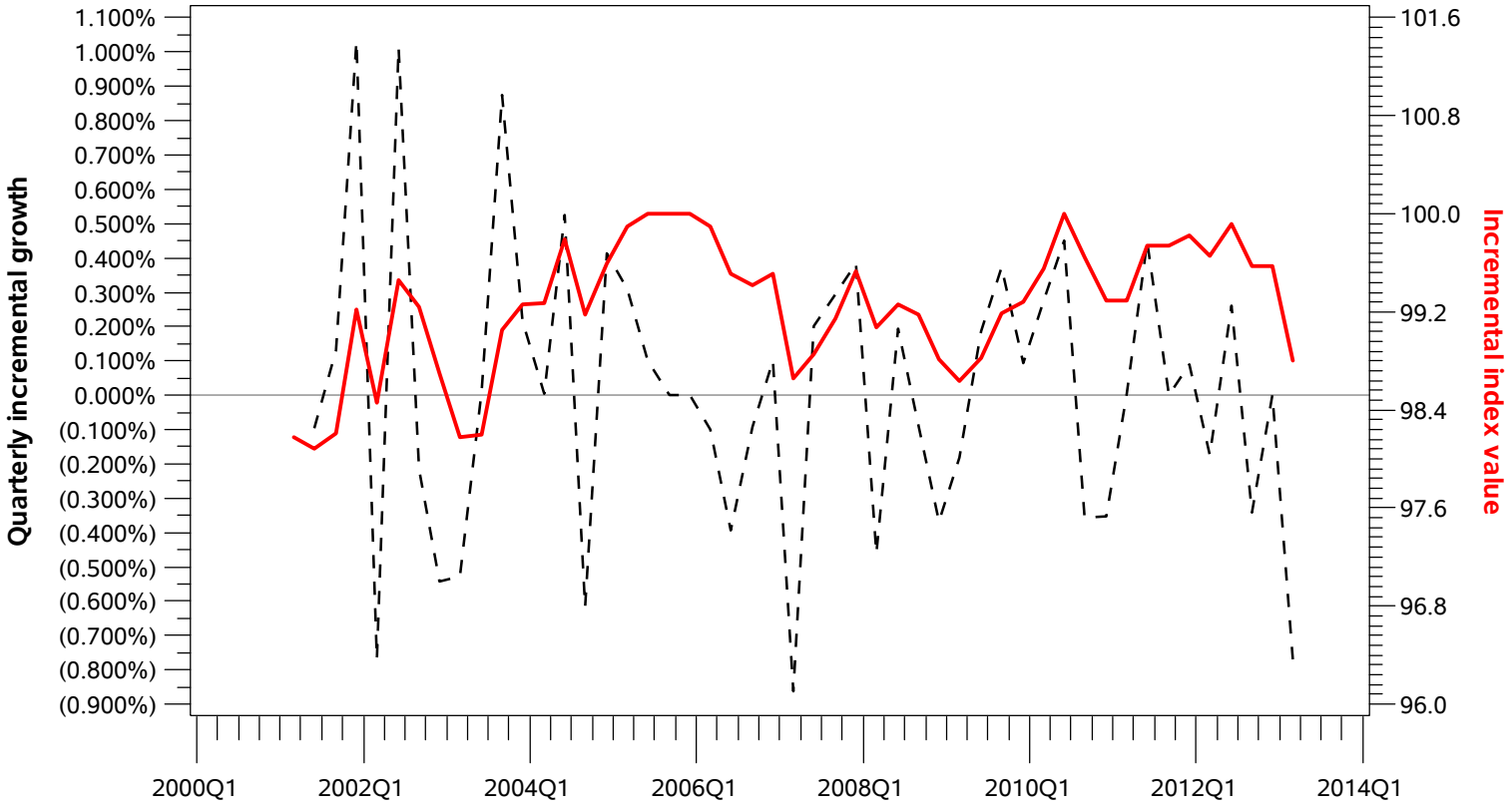


Table 43. Wages and Salaries, Private Industry: Retail trade

LABSTAT series identifier: CIU2024120000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-61.2440	Z_{Tau}	-9.4127
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	-0.0387	AR(1) coefficient	0.3167
Standard error	0.0469	Standard error	0.1399
t-statistic	-0.8256	t-statistic	2.2648
Probability t	0.4133	Durbin-Watson	2.0449

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: (0.155%)

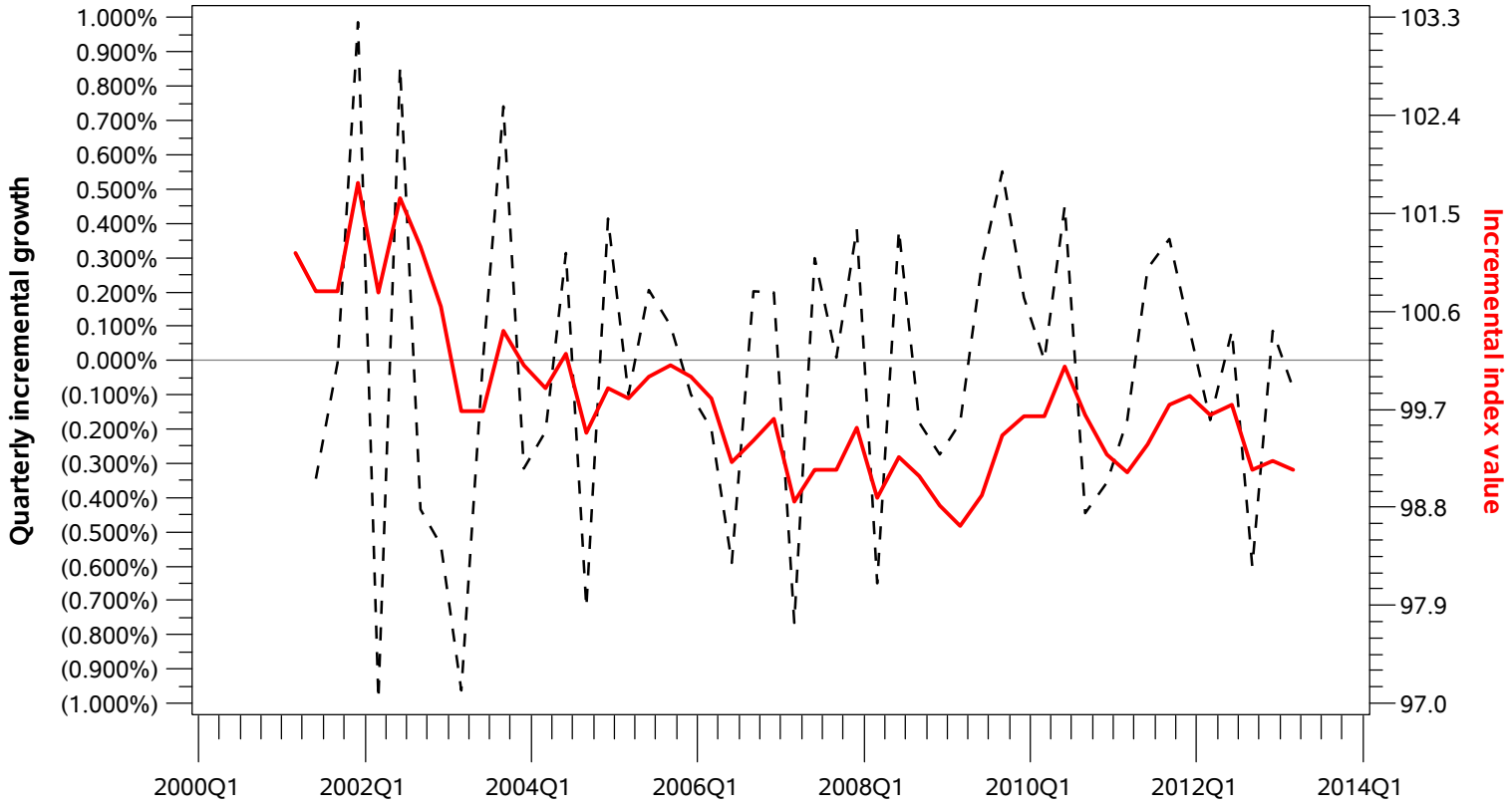


Table 44. Total Compensation, Private Industry: Information

LABSTAT series identifier: CIU2015100000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-47.9587	Z_{Tau}	-6.8806
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0588	AR(1) coefficient	0.0238
Standard error	0.0733	Standard error	0.1474
t-statistic	0.8018	t-statistic	0.1612
Probability t	0.4268	Durbin-Watson	2.0077

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.235%

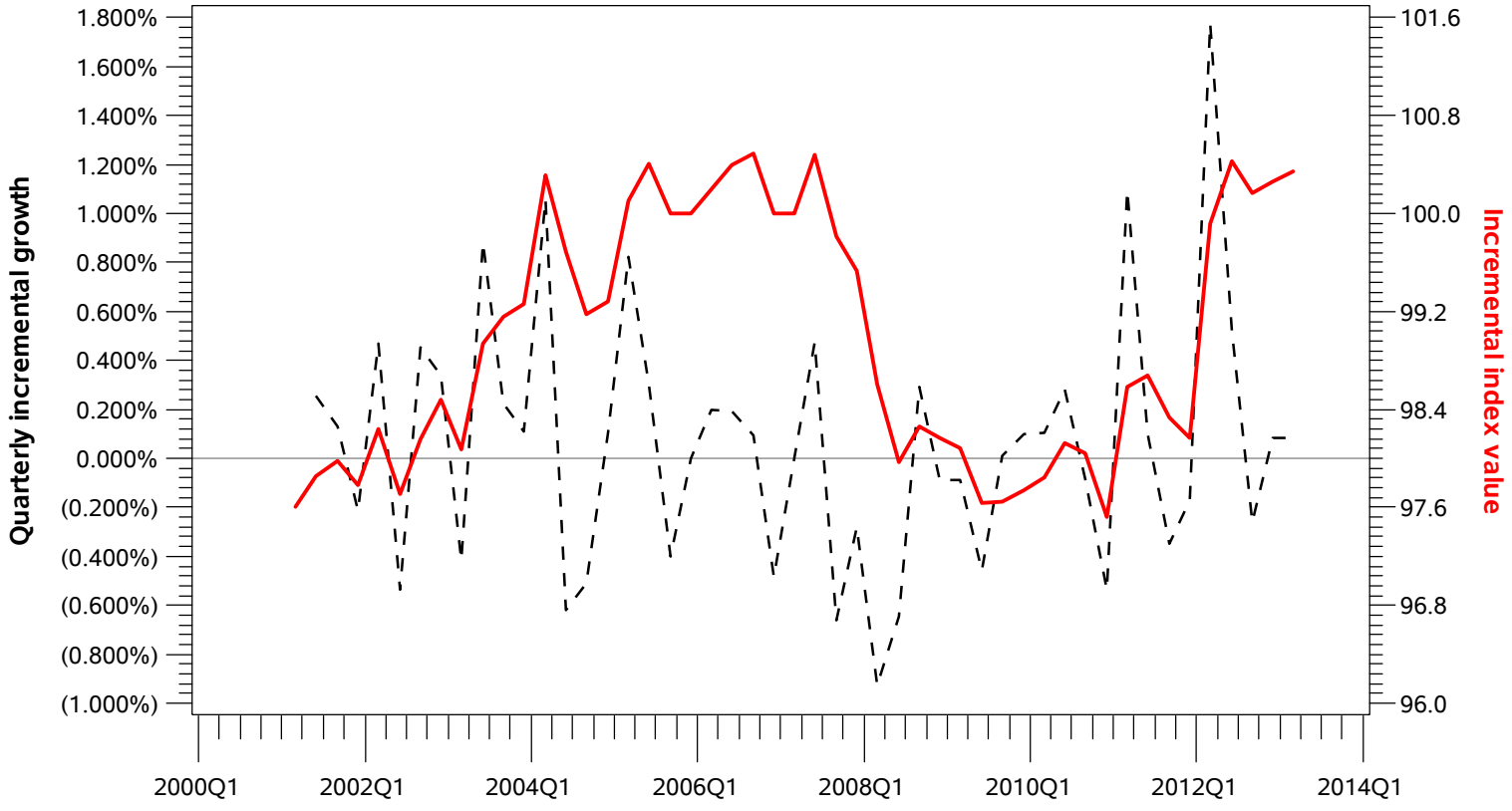


Table 45. Wages and Salaries, Private Industry: Information

LABSTAT series identifier: CIU2025100000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-54.9003	Z_{Tau}	-8.3072
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	-0.0293	AR(1) coefficient	0.1899
Standard error	0.0478	Standard error	0.1448
t-statistic	-0.6123	t-statistic	1.3121
Probability t	0.5434	Durbin-Watson	2.0242

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: (0.117%)

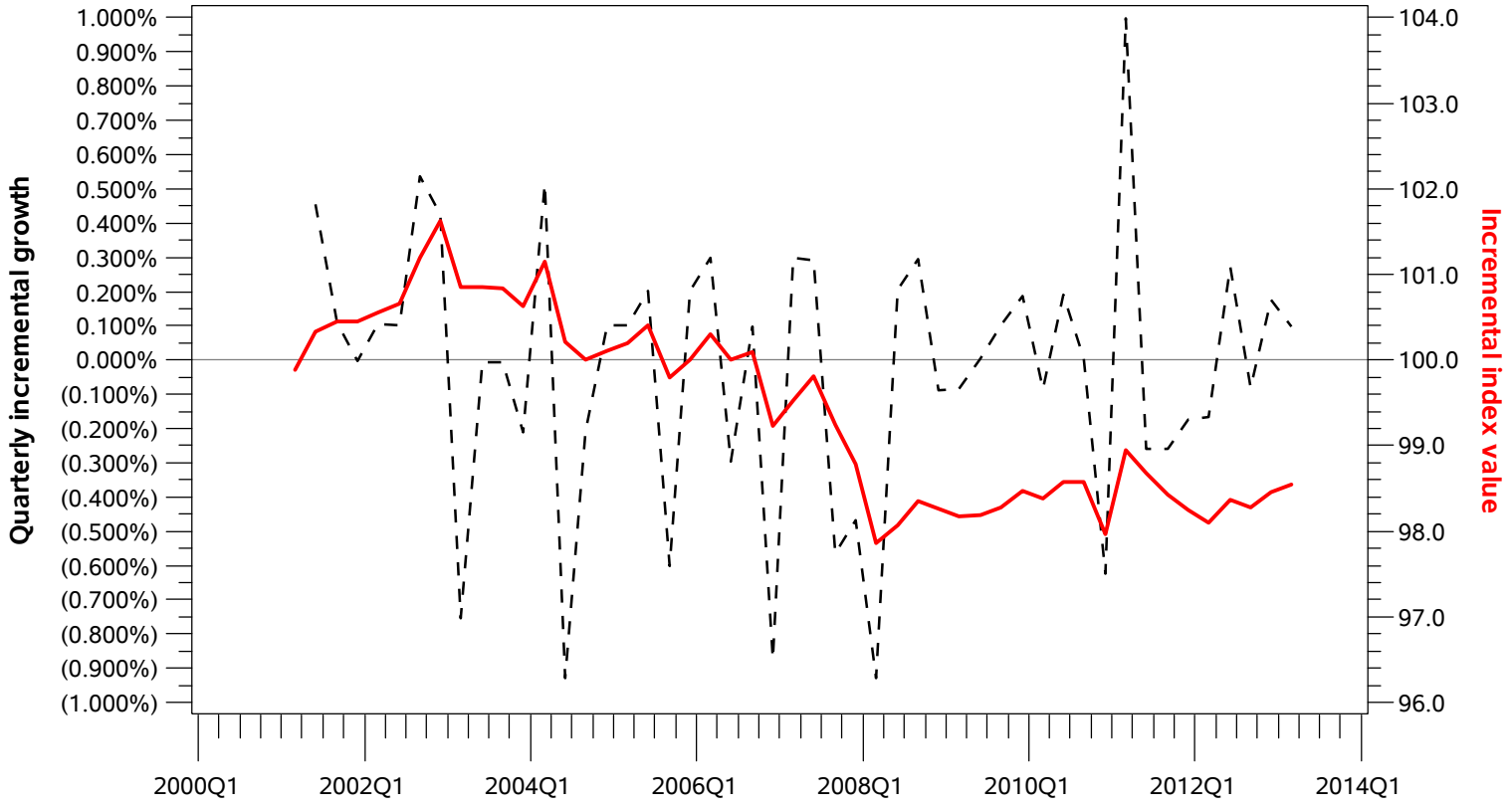


Table 46. Total Compensation, Private Industry: Financial activities

LABSTAT series identifier: CIU201520A000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-120.9860	Z_{Tau}	-11.8745
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1378	AR(1) coefficient	0.1147
Standard error	0.0648	Standard error	0.0947
t-statistic	2.1260	t-statistic	1.2109
Probability t	0.0357	Durbin-Watson	2.0001

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.552%

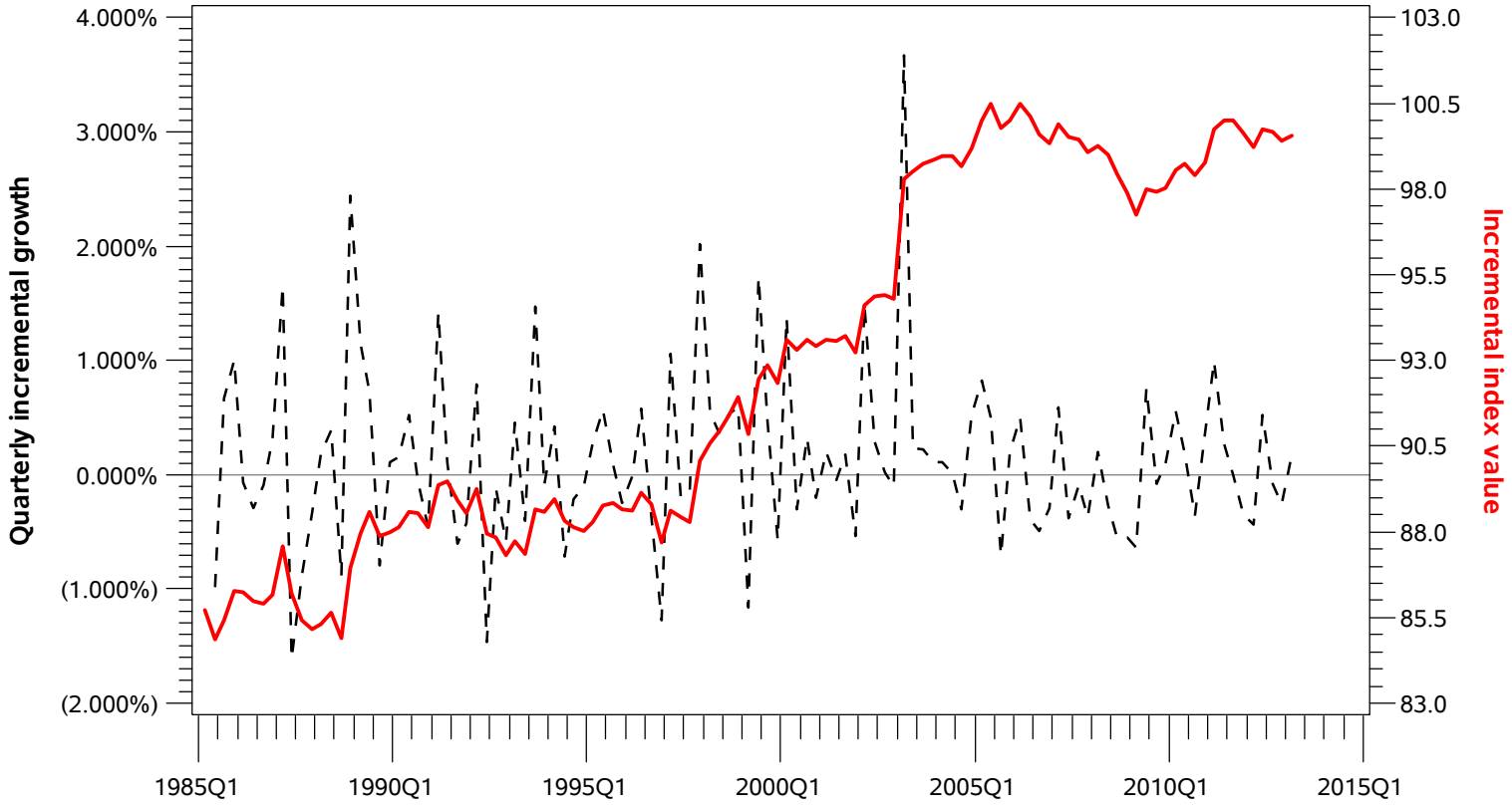


Table 47. Wages and Salaries, Private Industry: Financial activities

LABSTAT series identifier: CIU202520A000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-126.7521	Z_{Tau}	-12.1804
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0806	AR(1) coefficient	0.1435
Standard error	0.0735	Standard error	0.0944
t-statistic	1.0959	t-statistic	1.5210
Probability t	0.2755	Durbin-Watson	1.9915

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.323%

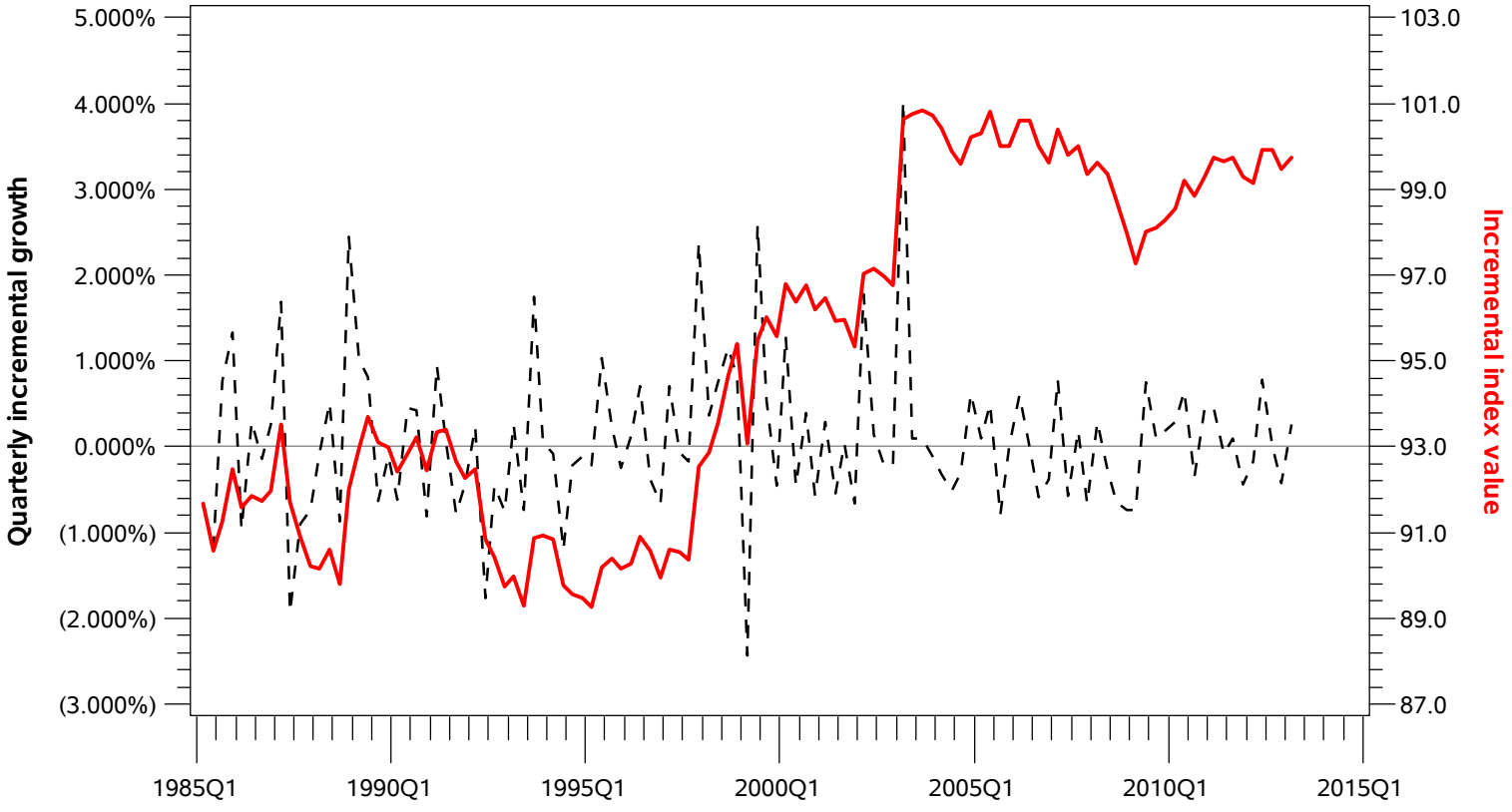


Table 48. Total Compensation, Private Industry: Education and health services

LABSTAT series identifier: CIU2016000000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-50.7978	Z_{Tau}	-7.0434
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1377	AR(1) coefficient	0.0567
Standard error	0.0344	Standard error	0.1472
t-statistic	4.0038	t-statistic	0.3849
Probability t	0.0002	Durbin-Watson	1.9559

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.552%

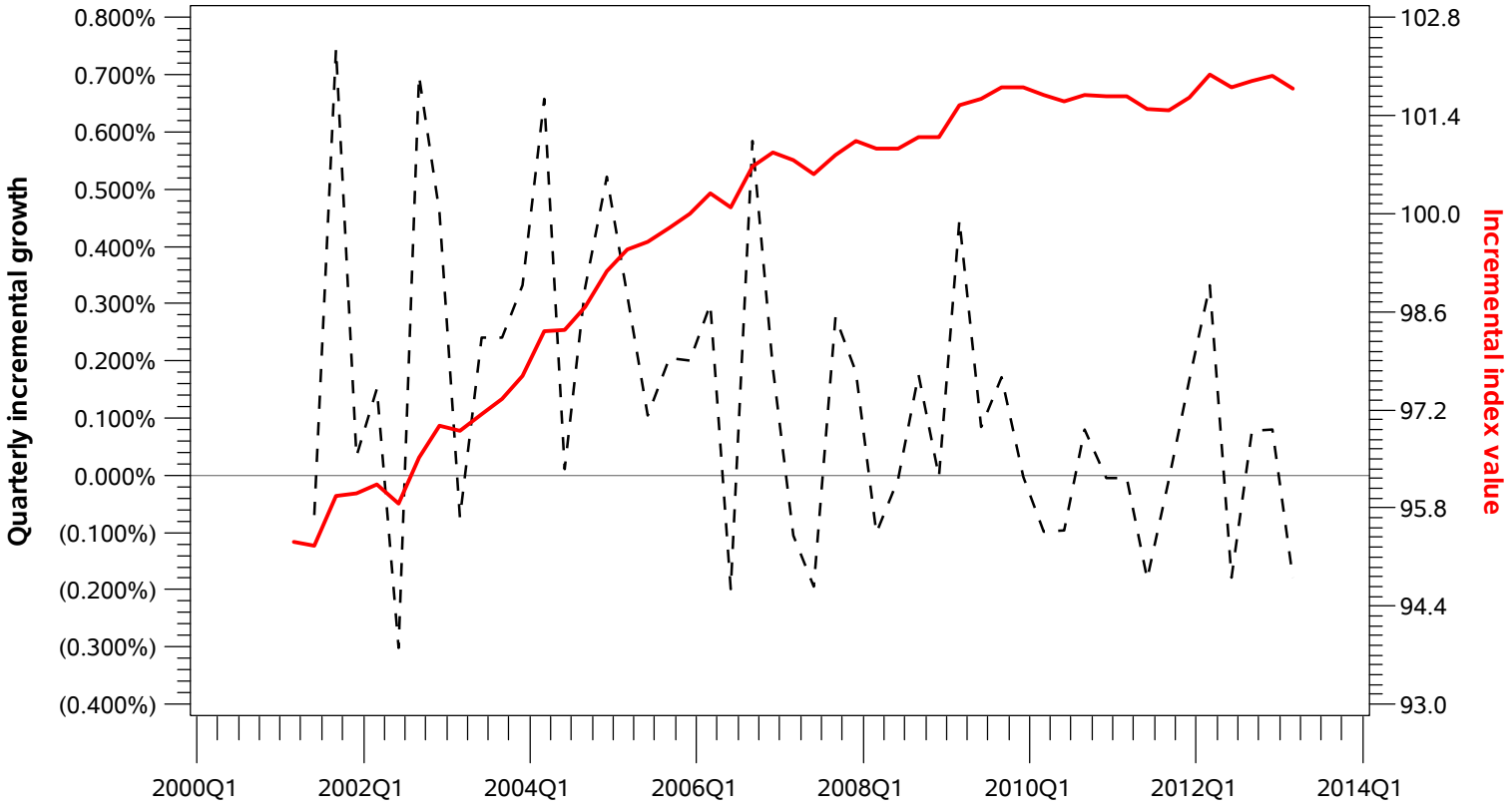


Table 49. Wages and Salaries, Private Industry: Education and health services

LABSTAT series identifier: CIU2026000000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-50.3184	Z_{Tau}	-7.0566
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0793	AR(1) coefficient	0.0625
Standard error	0.0353	Standard error	0.1472
t-statistic	2.2494	t-statistic	0.4245
Probability t	0.0293	Durbin-Watson	2.0056

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.318%

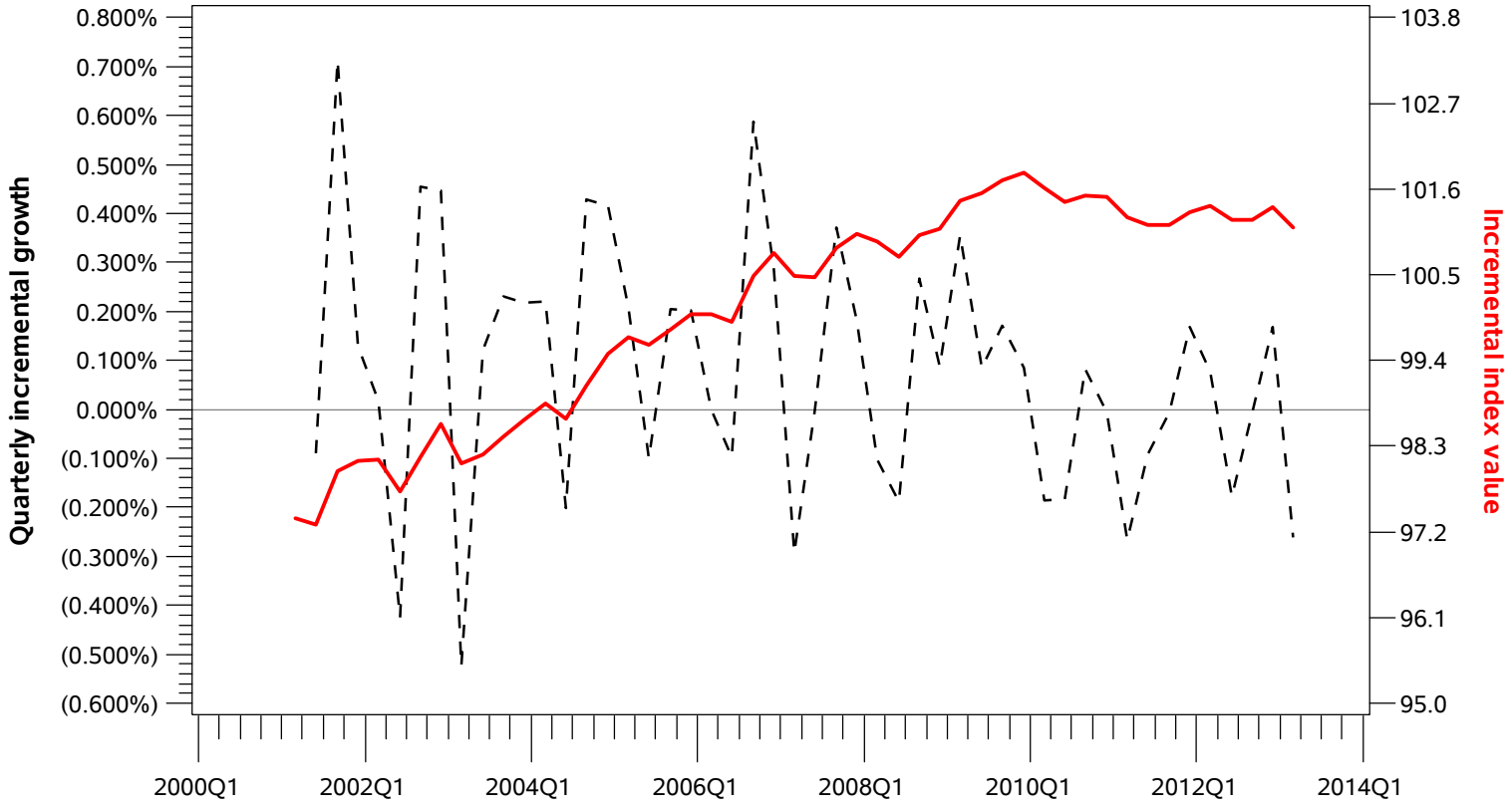


Table 50. Total Compensation, Private Industry: Education services

LABSTAT series identifier: CIU2016100000000I

Historical data period: DEC-1988 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-114.8767	Z_{Tau}	-12.5737
Prob Z_{Rho}	0.0009	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1622	AR(1) coefficient	0.2418
Standard error	0.0677	Standard error	0.0996
t-statistic	2.3960	t-statistic	2.4292
Probability t	0.0185	Durbin-Watson	2.1850

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.650%

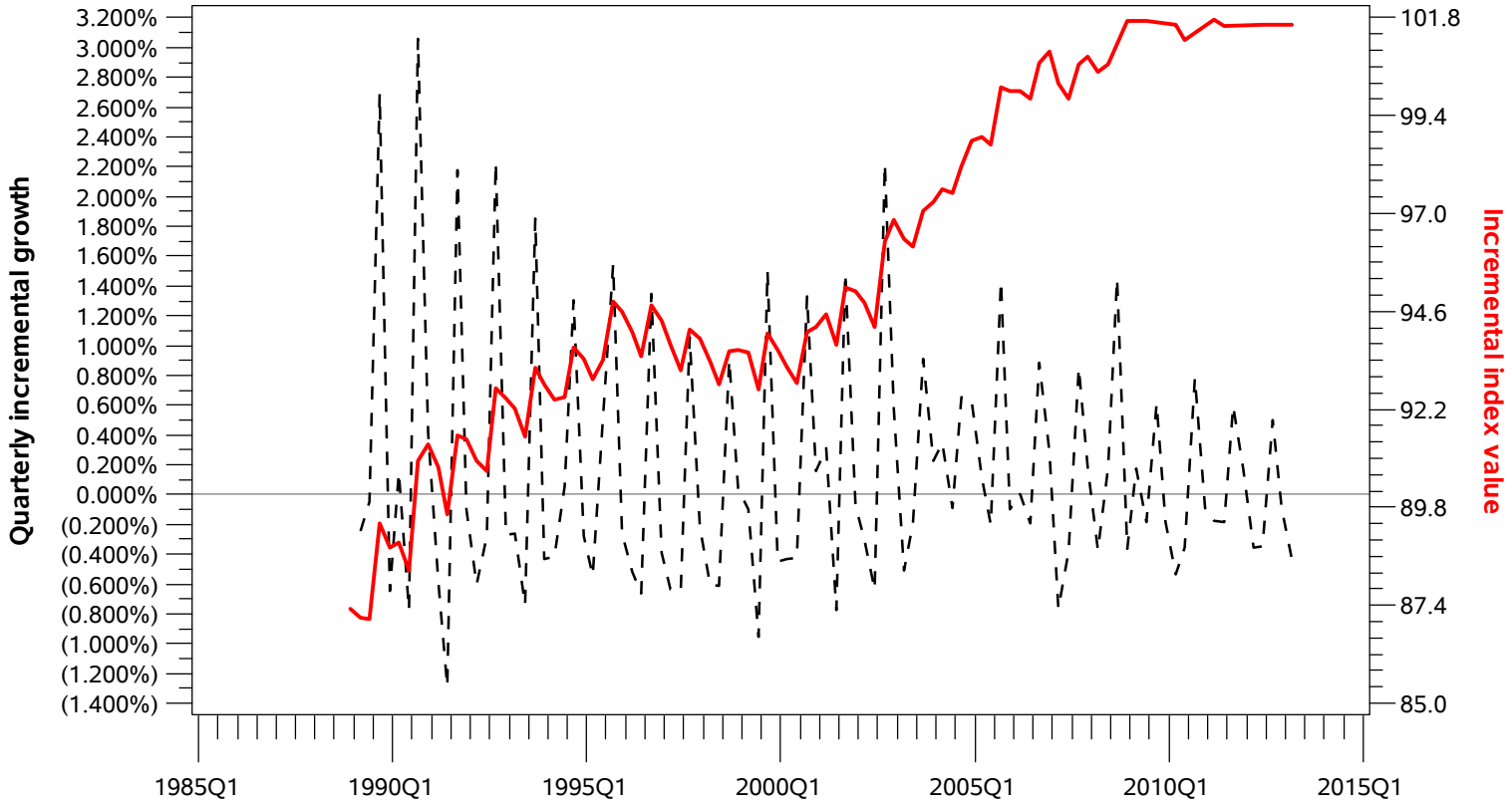


Table 51. Wages and Salaries, Private Industry: Education services

LABSTAT series identifier: CIU2026100000000I

Historical data period: DEC-1988 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-110.0874	Z_{Tau}	-12.0986
Prob Z_{Rho}	0.0009	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0778	AR(1) coefficient	0.2022
Standard error	0.0730	Standard error	0.1005
t-statistic	1.0665	t-statistic	2.0126
Probability t	0.2889	Durbin-Watson	2.2146

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.312%

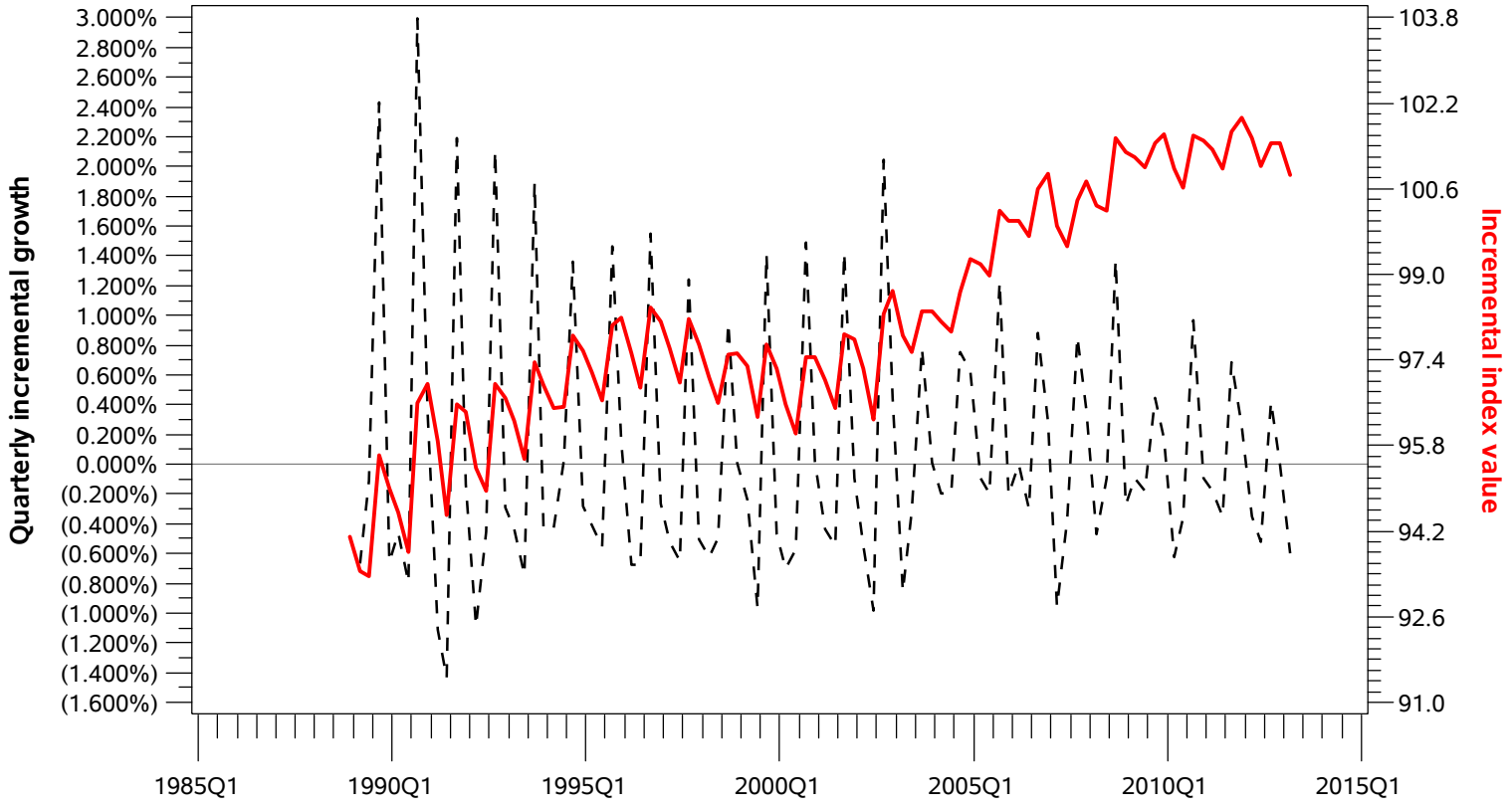


Table 52. Total Compensation, Private Industry: Junior colleges, colleges, and universities

LABSTAT series identifier: CIU2016120000000I

Historical data period: DEC-1988 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-114.8660	Z_{Tau}	-12.4208
Prob Z_{Rho}	0.0009	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1550	AR(1) coefficient	0.2327
Standard error	0.0628	Standard error	0.0998
t-statistic	2.4672	t-statistic	2.3325
Probability t	0.0154	Durbin-Watson	2.1482

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.622%

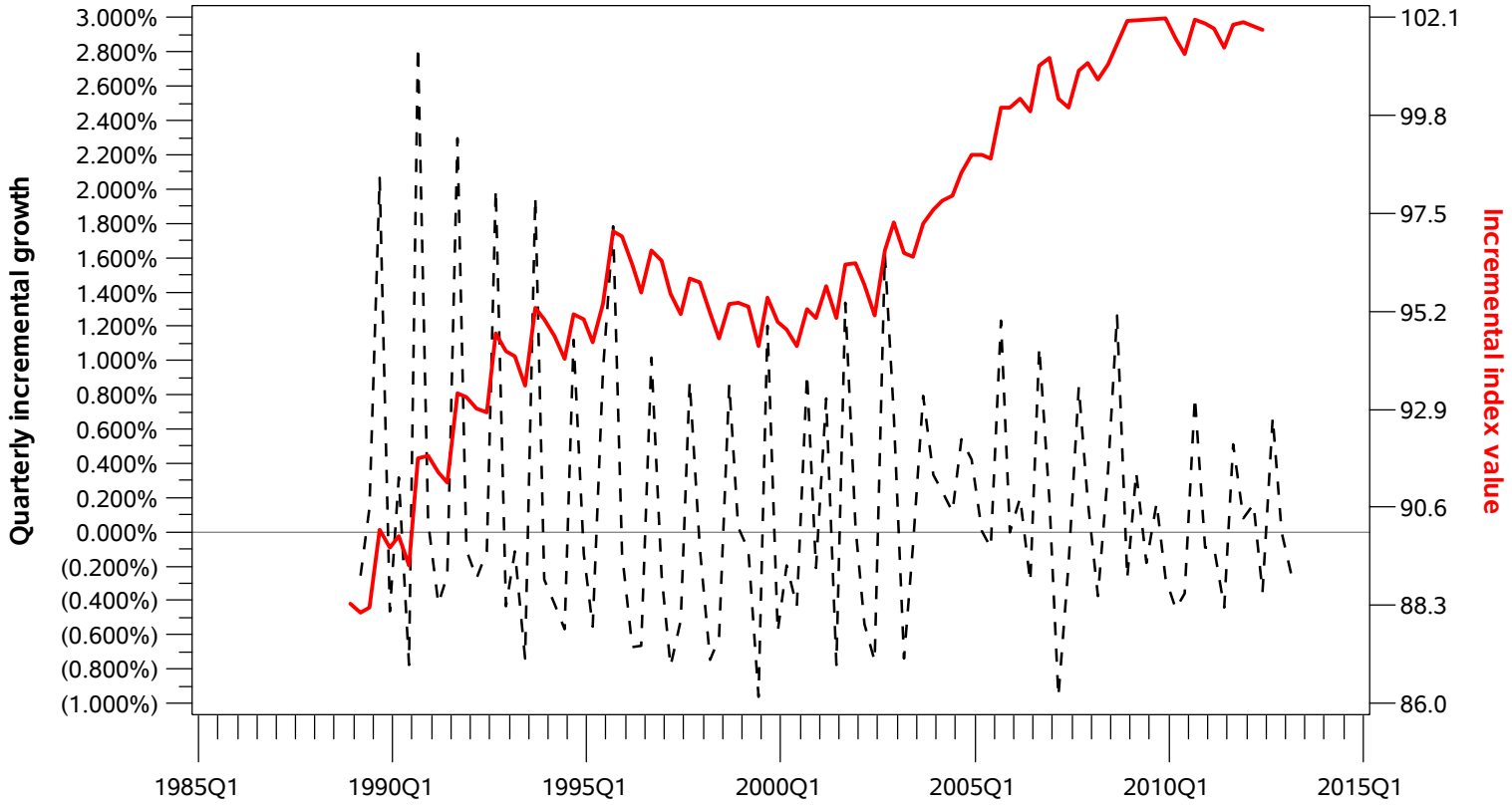


Table 53. Wages and Salaries, Private Industry: Junior colleges, colleges, and universities

LABSTAT series identifier: CIU2026120000000I

Historical data period: DEC-1988 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-111.3730	Z_{Tau}	-12.3281
Prob Z_{Rho}	0.0009	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0625	AR(1) coefficient	0.2171
Standard error	0.0676	Standard error	0.1001
t-statistic	0.9251	t-statistic	2.1681
Probability t	0.3573	Durbin-Watson	2.2219

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.250%

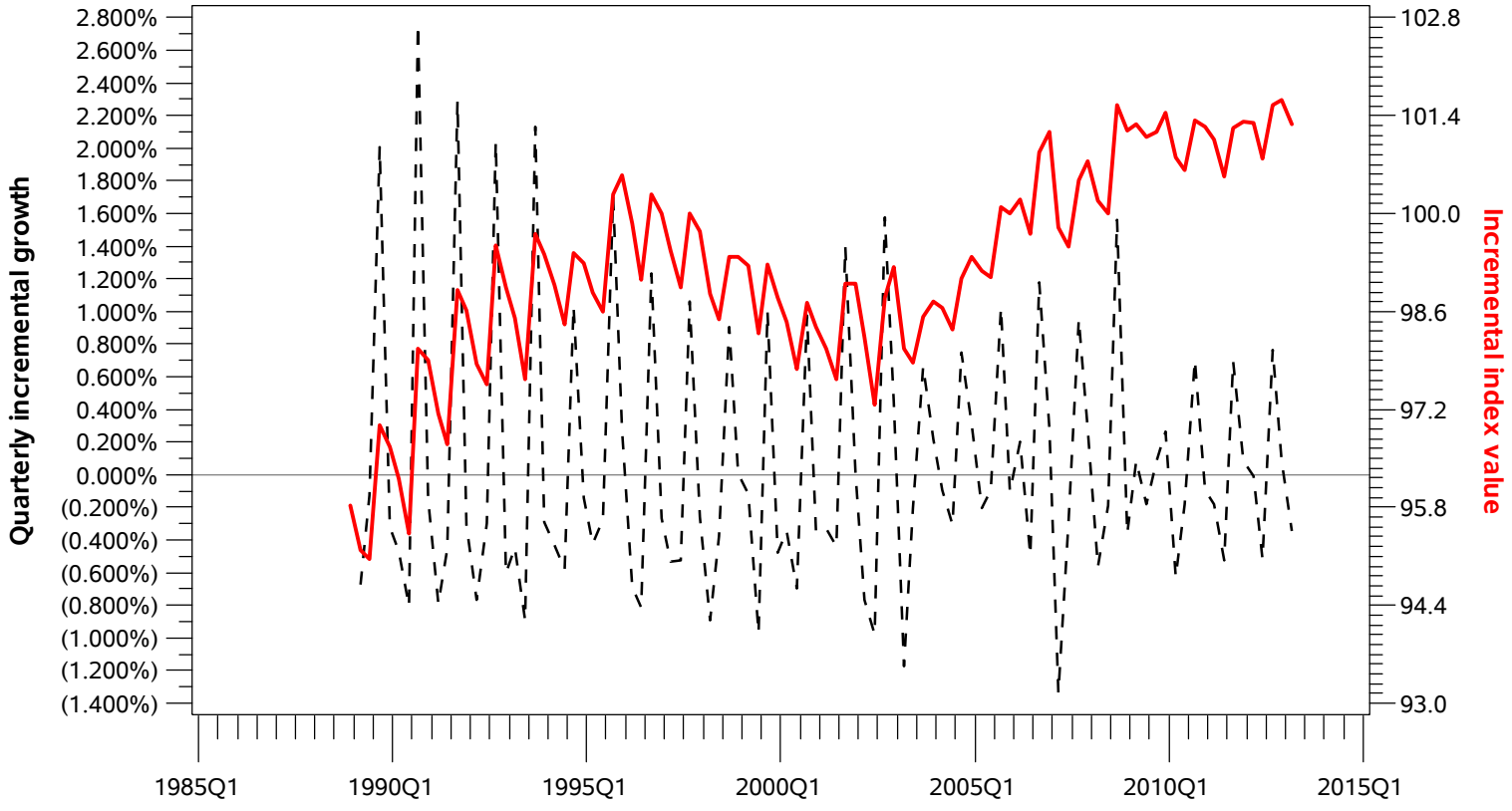


Table 54. Total Compensation, Private Industry: Health care and social assistance

LABSTAT series identifier: CIU2016200000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-44.8794	Z_{Tau}	-6.2431
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1341	AR(1) coefficient	-0.0500
Standard error	0.0340	Standard error	0.1473
t-statistic	3.9489	t-statistic	-0.3396
Probability t	0.0003	Durbin-Watson	1.9600

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.538%

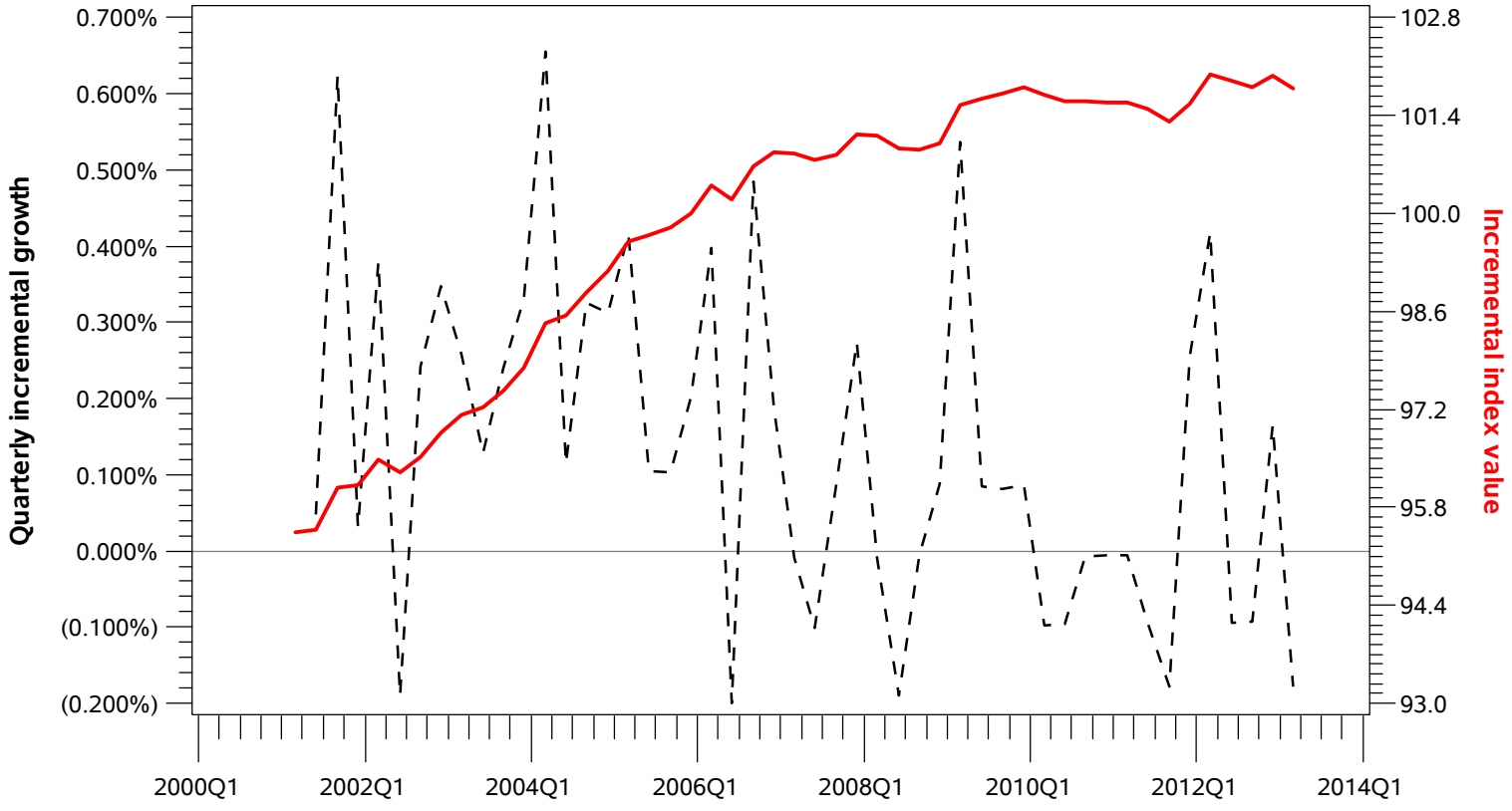


Table 55. Wages and Salaries, Private Industry: Health care and social assistance

LABSTAT series identifier: CIU2026200000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-43.9506	Z_{Tau}	-6.1085
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0782	AR(1) coefficient	-0.0614
Standard error	0.0325	Standard error	0.1472
t-statistic	2.4061	t-statistic	-0.4173
Probability t	0.0202	Durbin-Watson	1.9060

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.313%

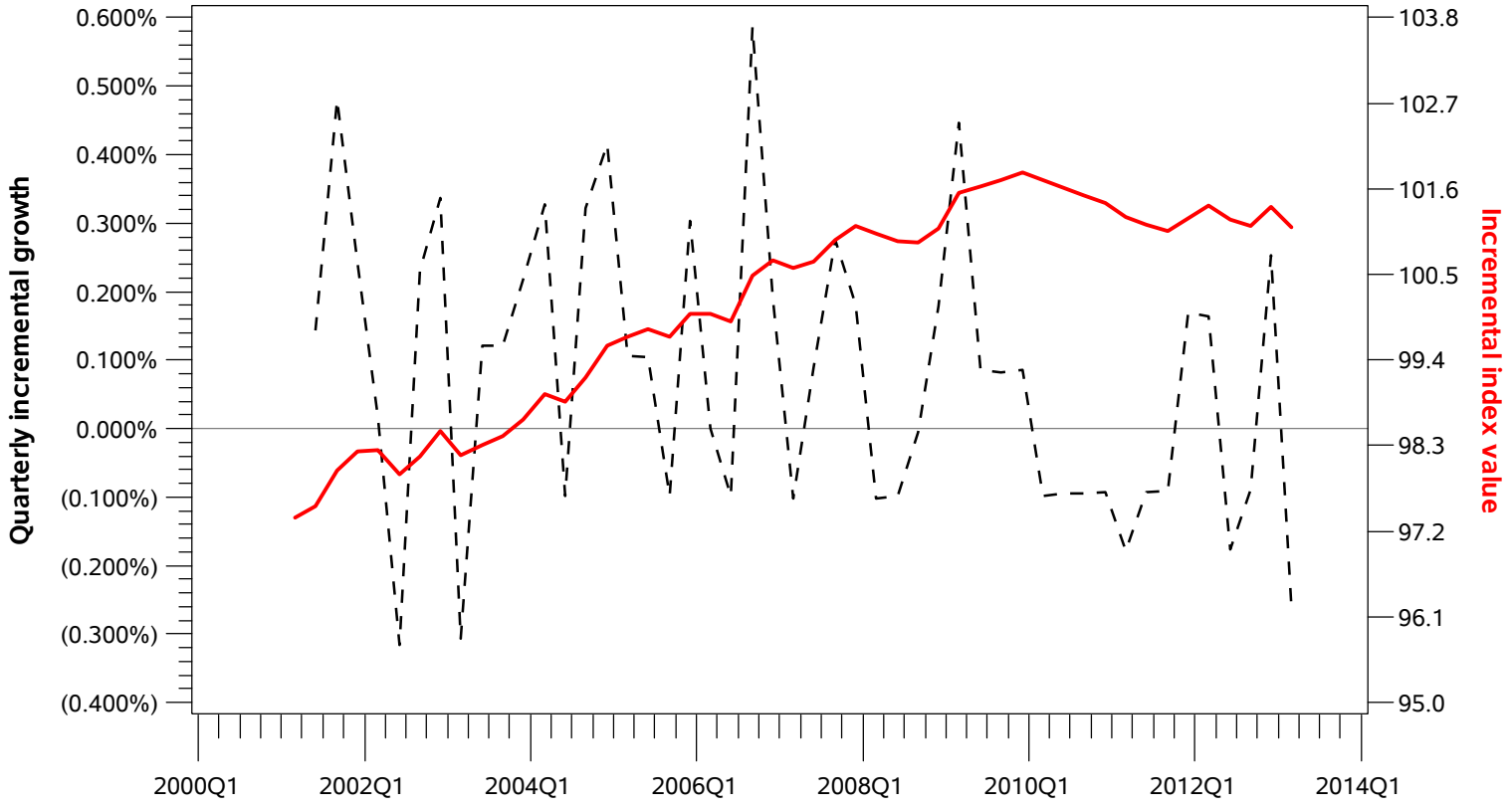


Table 56. Total Compensation, Private Industry: Hospitals

LABSTAT series identifier: CIU2016220000000I

Historical data period: JUN-1986 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-58.1742	Z_{Tau}	-6.4551
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1860	AR(1) coefficient	-0.4157
Standard error	0.0628	Standard error	0.0888
t-statistic	2.9621	t-statistic	-4.6840
Probability t	0.0038	Durbin-Watson	2.1998

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.746%

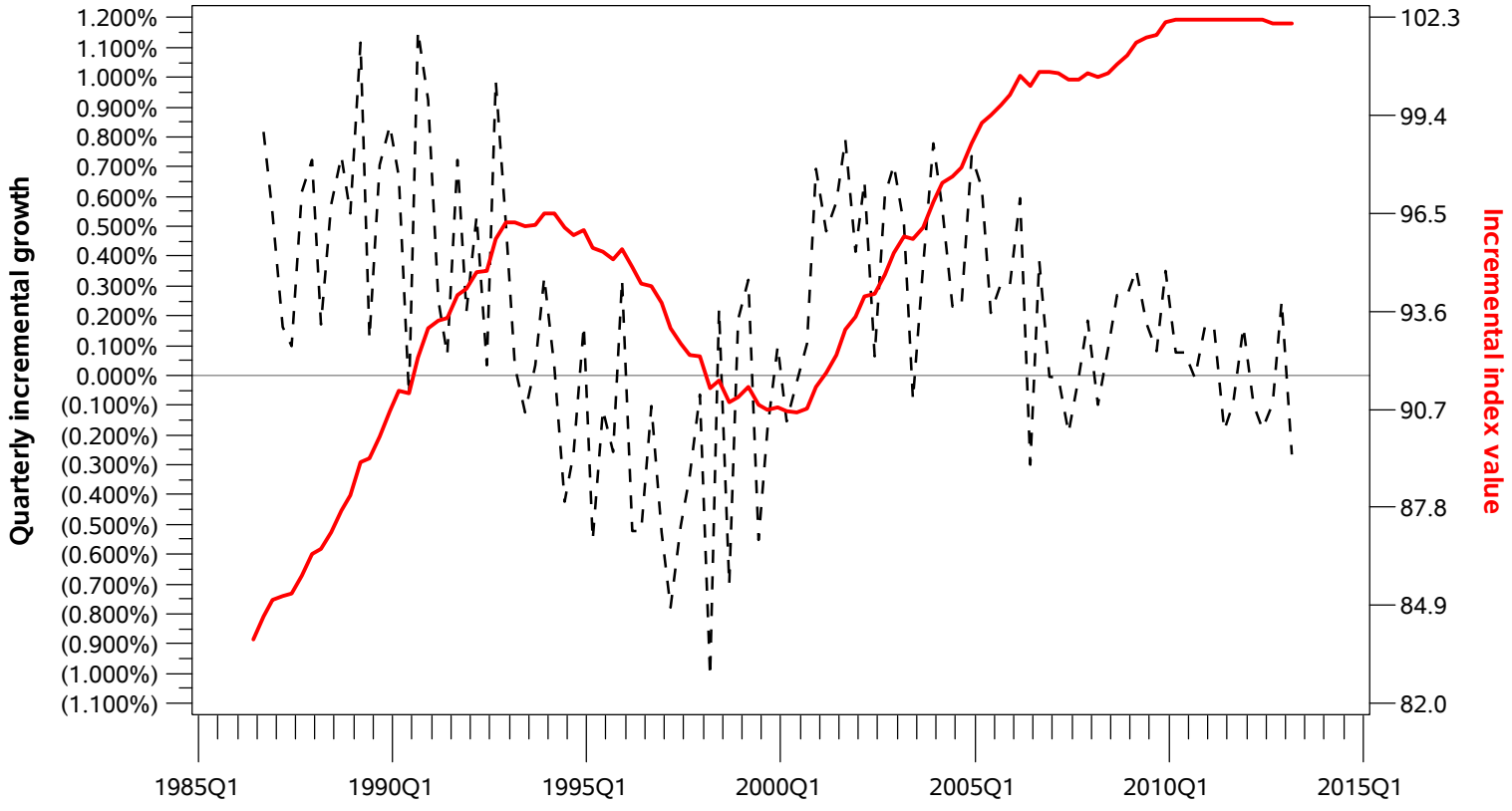


Table 57. Wages and Salaries, Private Industry: Hospitals

LABSTAT series identifier: CIU2026220000000I

Historical data period: JUN-1986 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-66.8035	Z_{Tau}	-7.1273
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1246	AR(1) coefficient	-0.3274
Standard error	0.0527	Standard error	0.0922
t-statistic	2.3656	t-statistic	-3.5505
Probability t	0.0198	Durbin-Watson	2.0520

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.499%

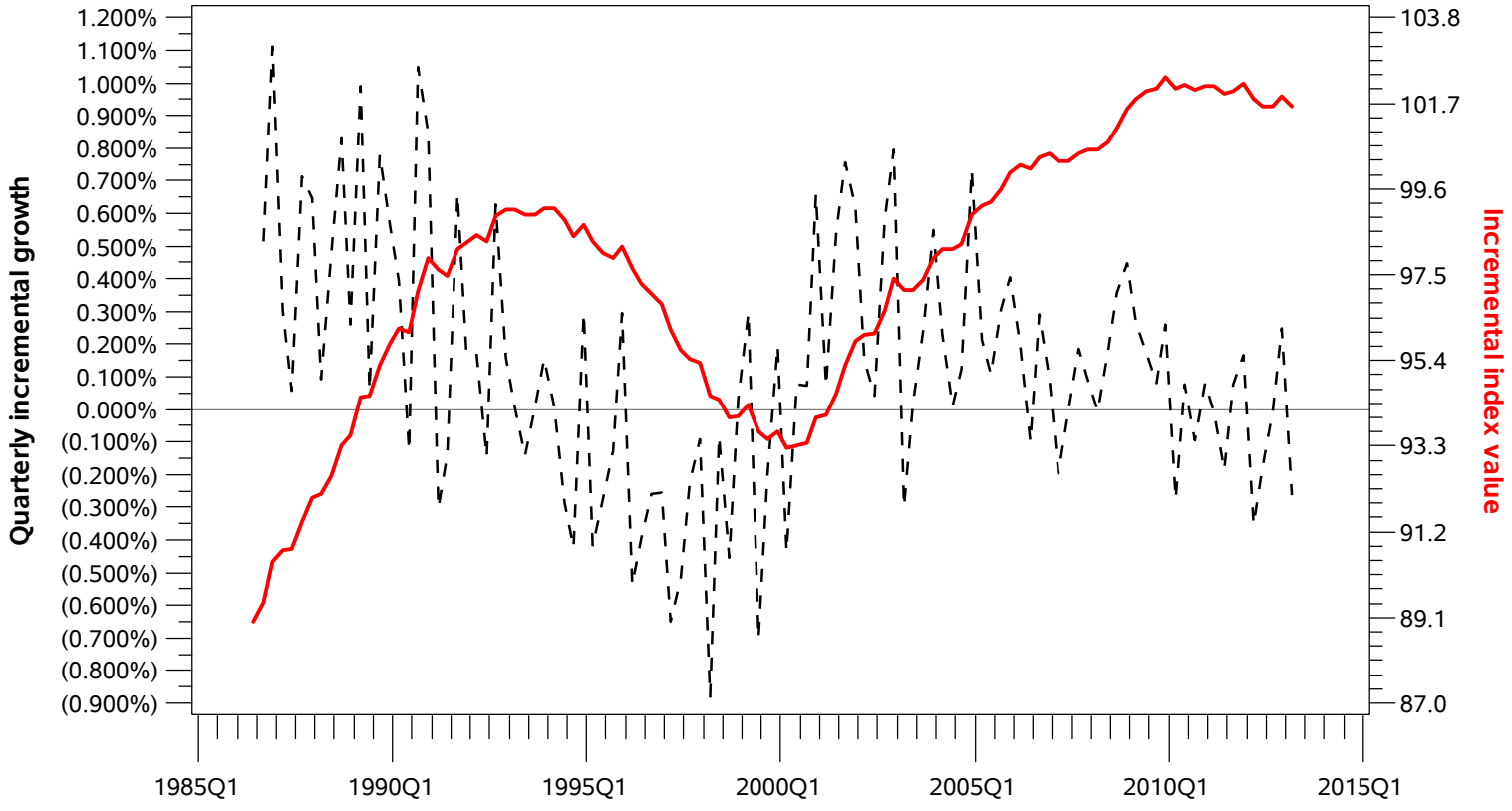


Table 58. Total Compensation, Private Industry: Nursing and residential care facilities

LABSTAT series identifier: CIU2016230000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-55.2826	Z_{Tau}	-7.4376
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0600	AR(1) coefficient	0.0883
Standard error	0.0503	Standard error	0.1469
t-statistic	1.1936	t-statistic	0.6013
Probability t	0.2388	Durbin-Watson	1.9266

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.240%

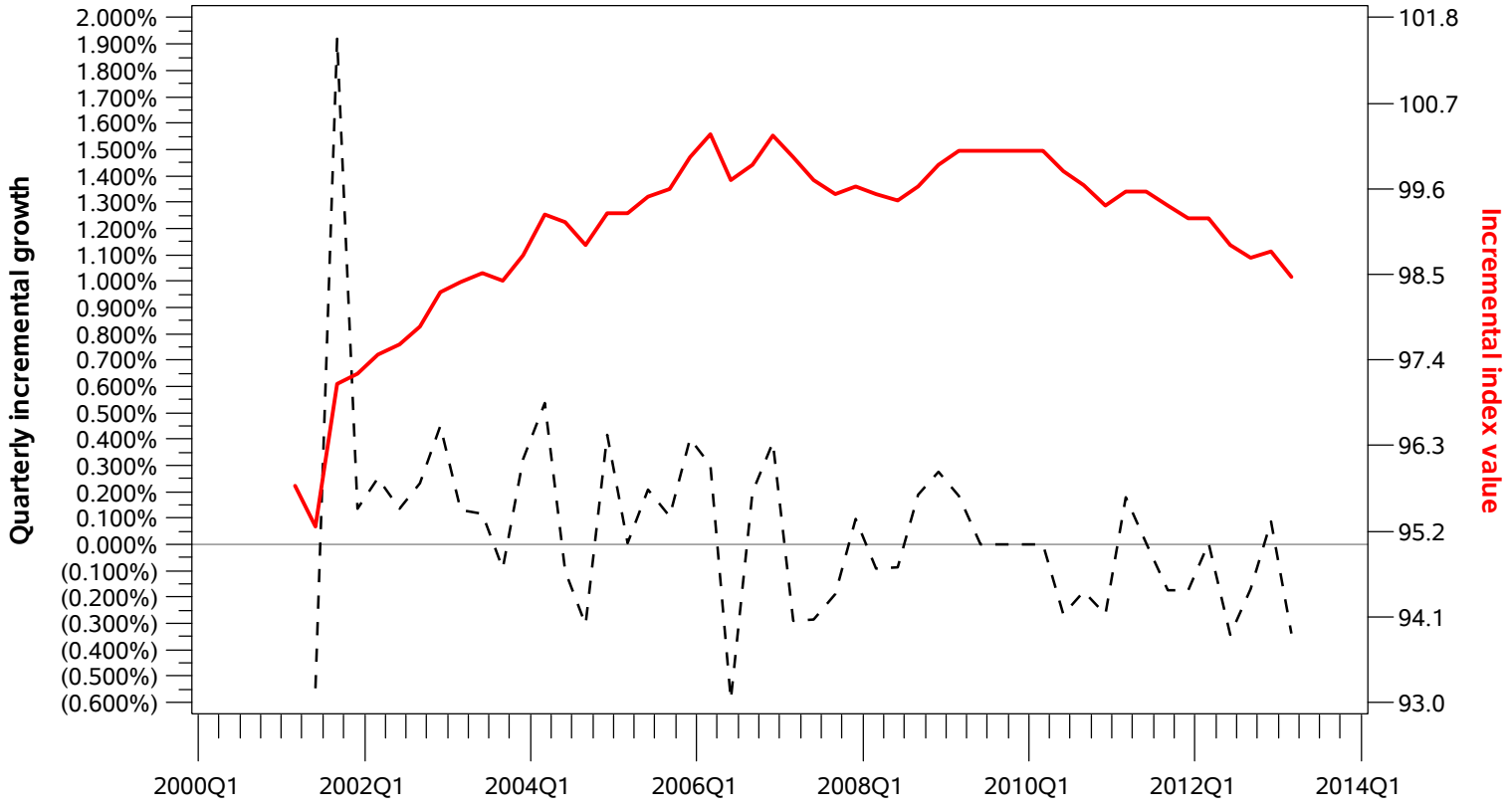


Table 59. Wages and Salaries, Private Industry: Nursing and residential care facilities

LABSTAT series identifier: CIU2026230000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-54.4341	Z_{Tau}	-7.3127
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0173	AR(1) coefficient	0.0628
Standard error	0.0535	Standard error	0.1472
t-statistic	0.3238	t-statistic	0.4268
Probability t	0.7476	Durbin-Watson	1.9269

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.069%

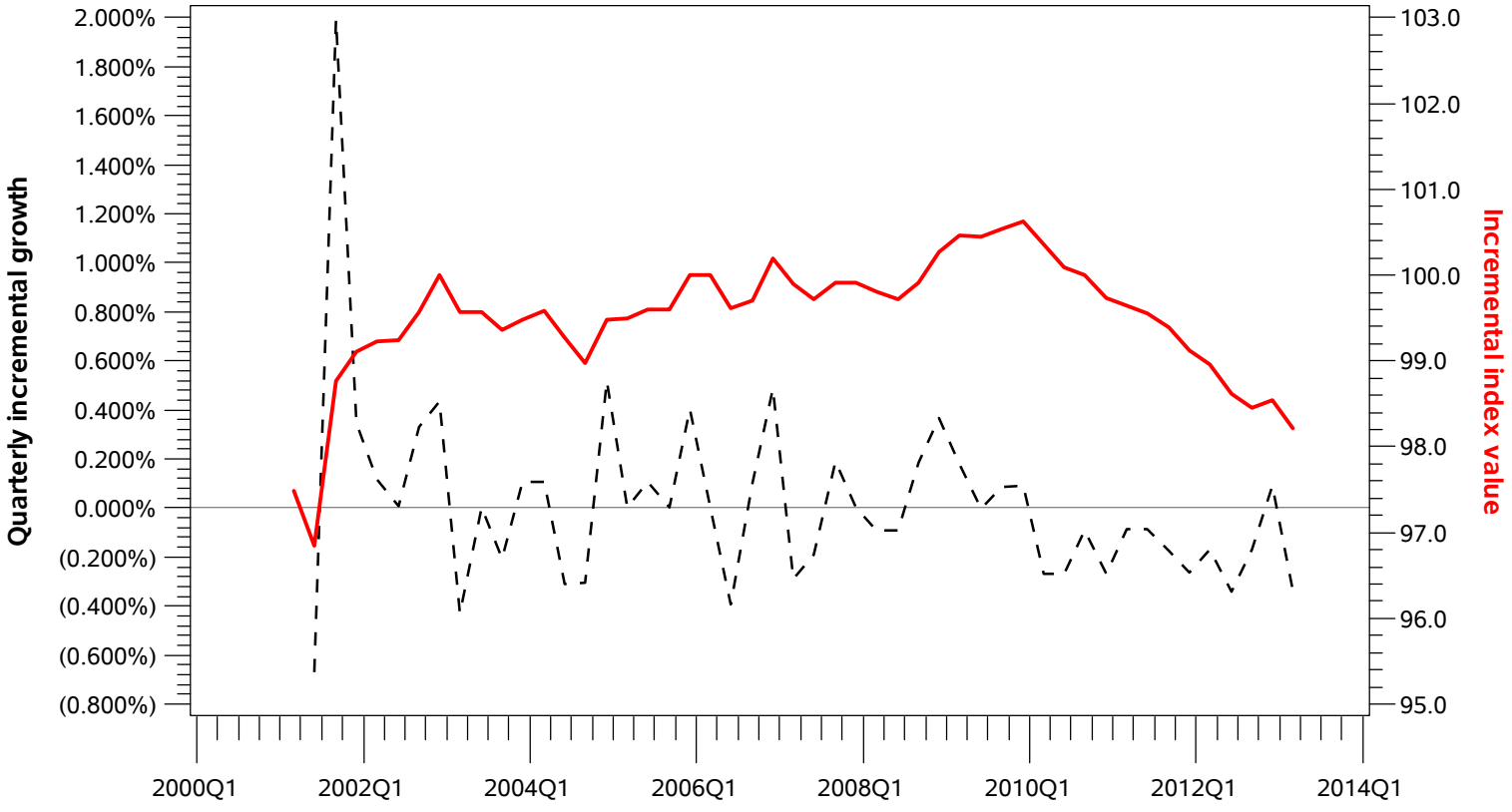


Table 60. Total Compensation, Private Industry: Leisure and hospitality

LABSTAT series identifier: CIU2017000000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-45.8374	Z_{Tau}	-6.4425
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	-0.0709	AR(1) coefficient	-0.0288
Standard error	0.0498	Standard error	0.1474
t-statistic	-1.4235	t-statistic	-0.1953
Probability t	0.1613	Durbin-Watson	1.9433

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: (0.283%)

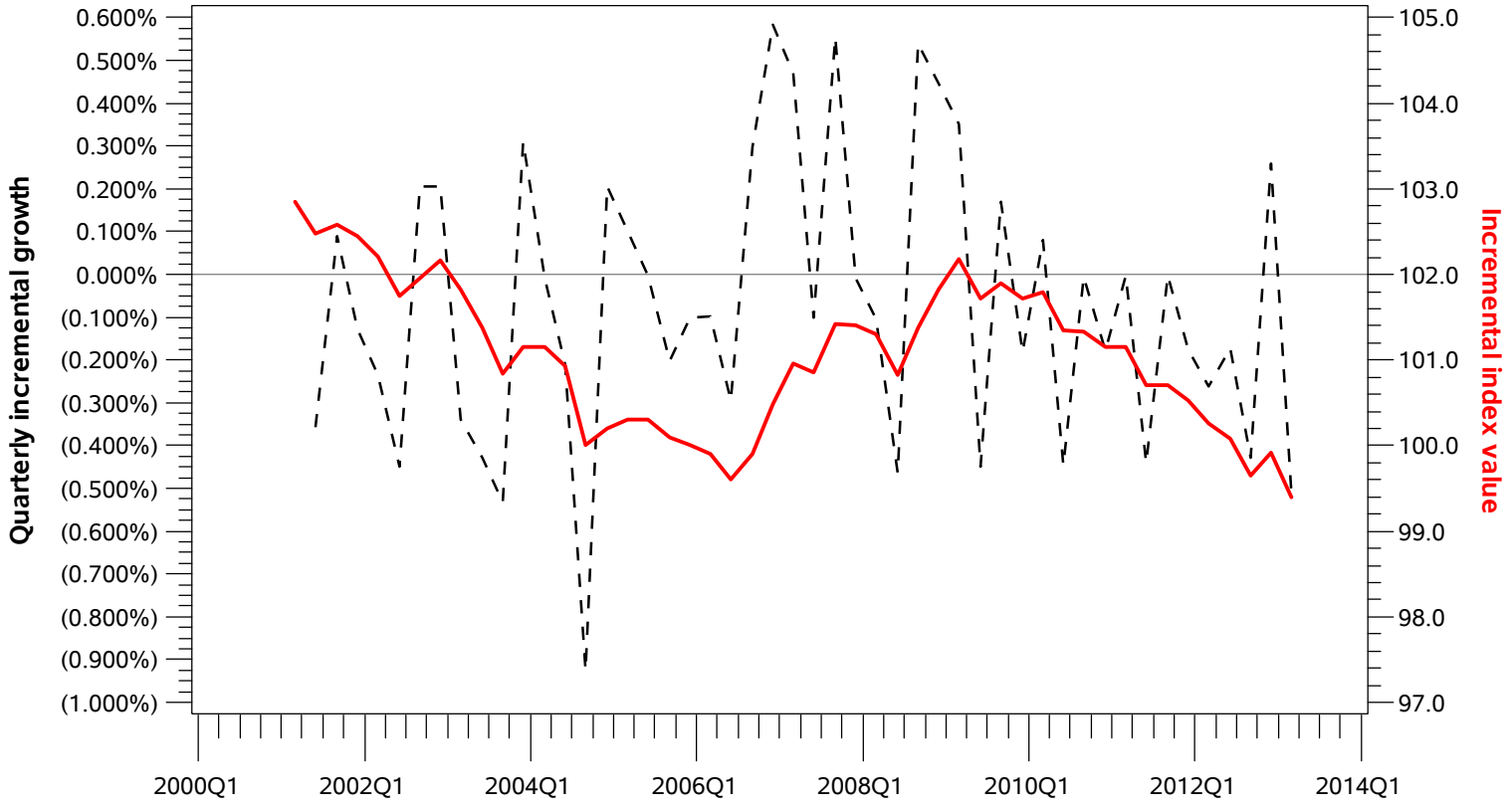


Table 61. Wages and Salaries, Private Industry: Leisure and hospitality

LABSTAT series identifier: CIU2027000000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-43.3982	Z_{Tau}	-6.1934
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	-0.0904	AR(1) coefficient	-0.0711
Standard error	0.0636	Standard error	0.1471
t-statistic	-1.4207	t-statistic	-0.4832
Probability t	0.1622	Durbin-Watson	1.9832

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: (0.361%)

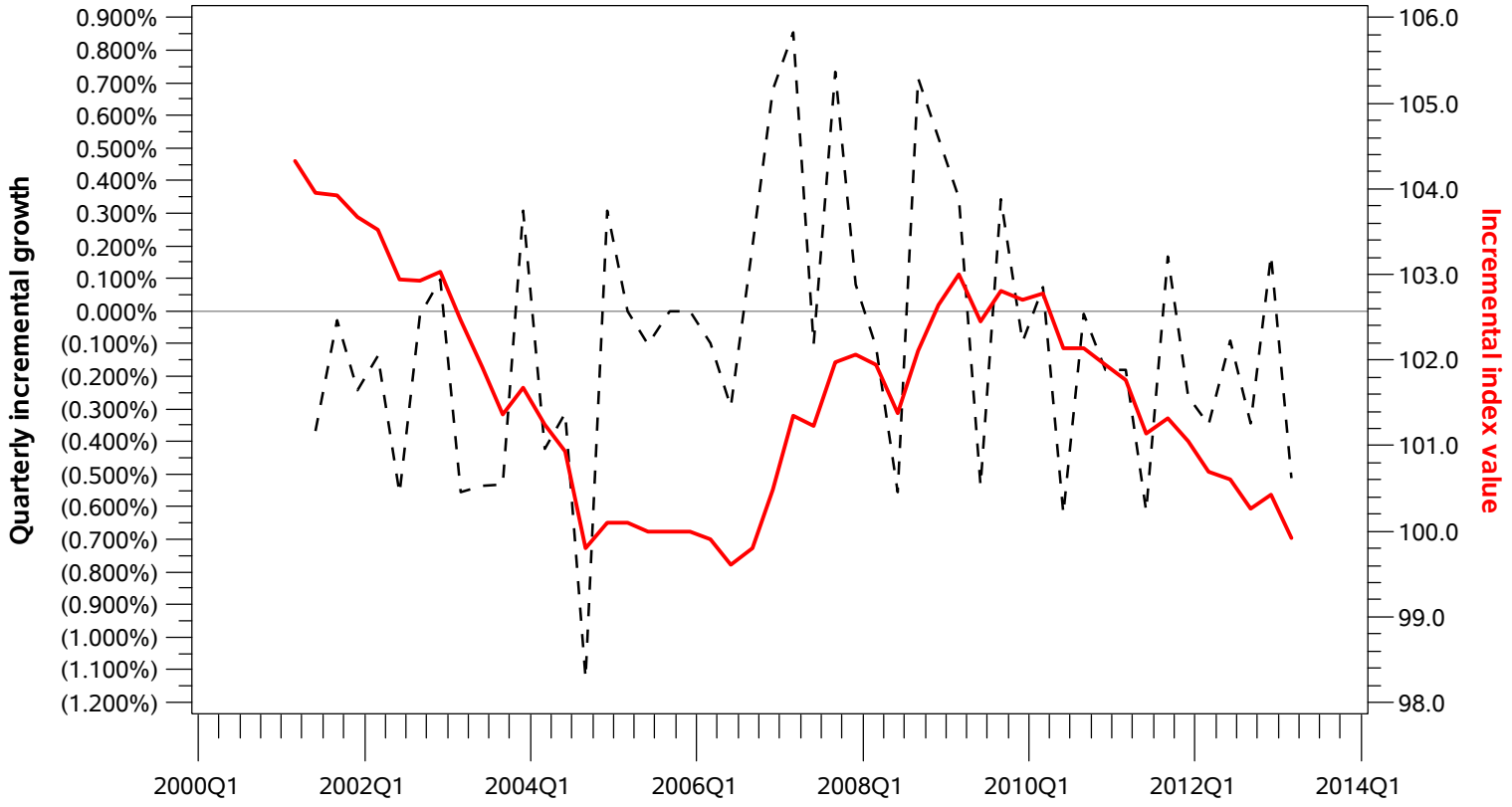


Table 62. Total Compensation, Private Industry: Accommodations and food service

LABSTAT series identifier: CIU2017200000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-54.4228	Z_{Tau}	-7.5030
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0018	AR(1) coefficient	0.1068
Standard error	0.0535	Standard error	0.1466
t-statistic	0.0332	t-statistic	0.7282
Probability t	0.9737	Durbin-Watson	1.8647

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.007%

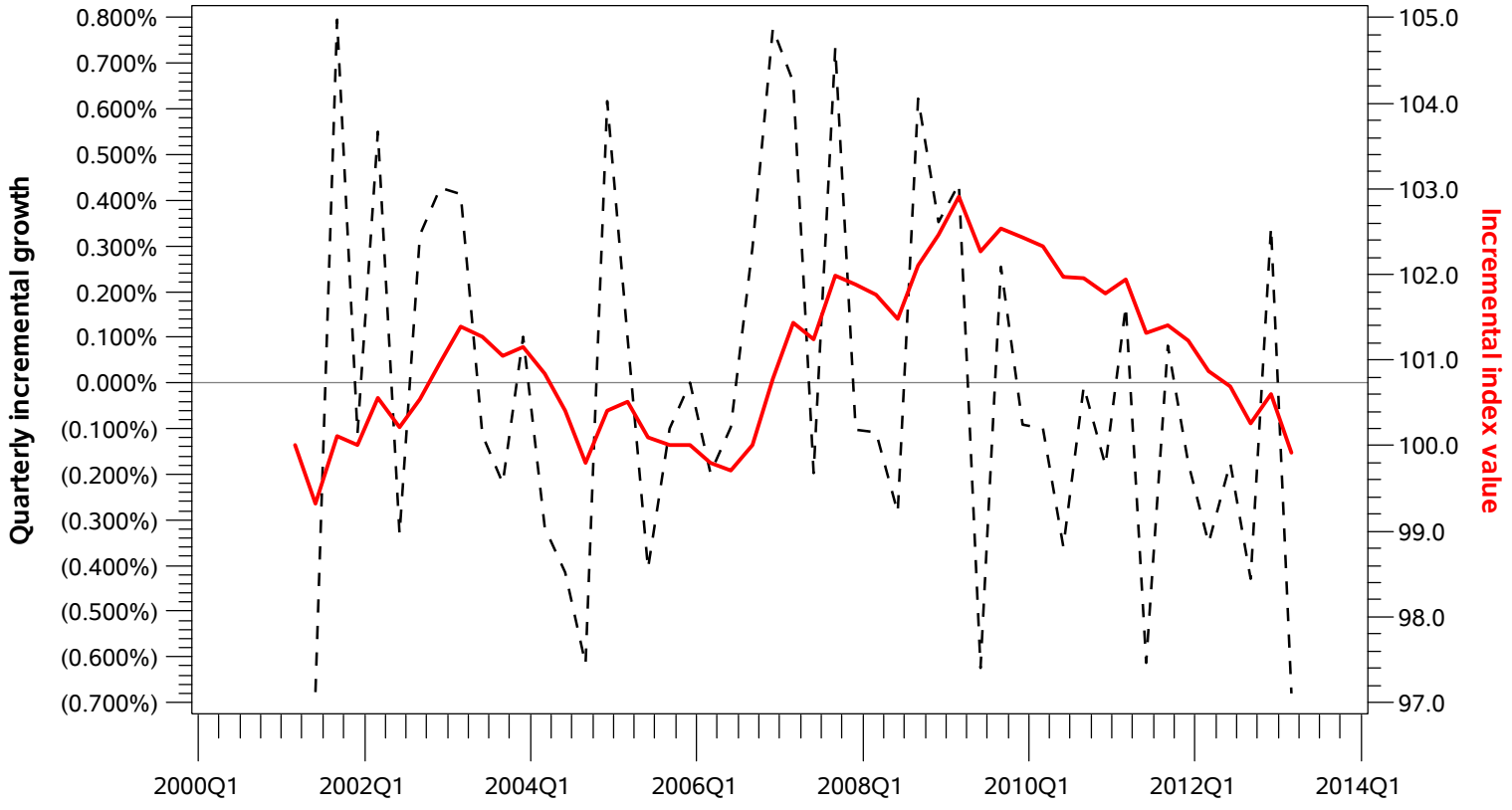


Table 63. Wages and Salaries, Private Industry: Accommodations and food service

LABSTAT series identifier: CIU2027200000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-55.0716	Z_{Tau}	-7.7682
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	-0.0211	AR(1) coefficient	0.1190
Standard error	0.0635	Standard error	0.1464
t-statistic	-0.3316	t-statistic	0.8130
Probability t	0.7417	Durbin-Watson	1.8657

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: (0.084%)

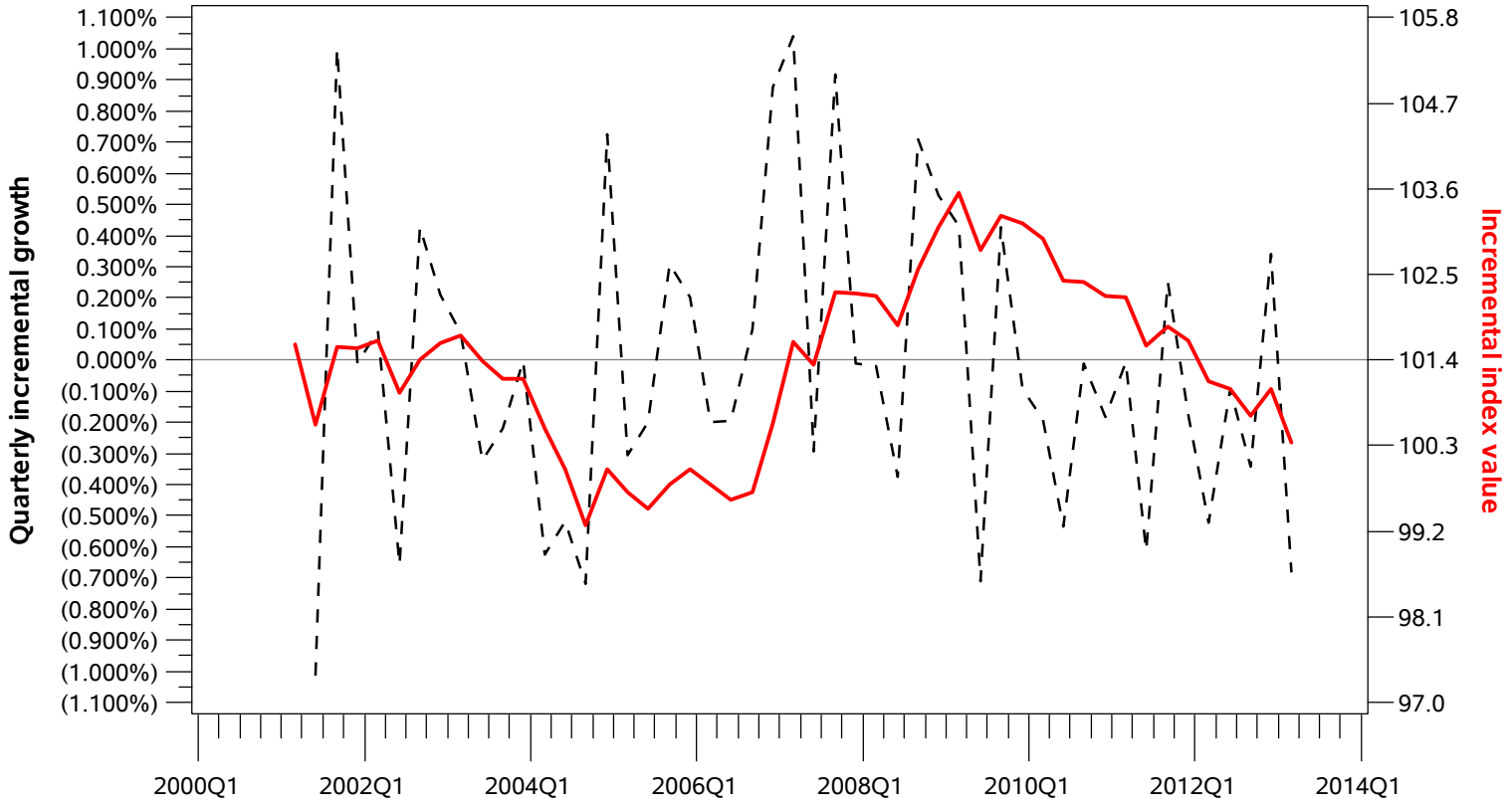


Table 64. Total Compensation, Private Industry: All union workers

LABSTAT series identifier: CIU2010000000510I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-39.0036	Z_{Tau}	-5.7128
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.2099	AR(1) coefficient	-0.1564
Standard error	0.0742	Standard error	0.1456
t-statistic	2.8295	t-statistic	-1.0741
Probability t	0.0069	Durbin-Watson	2.0492

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.842%

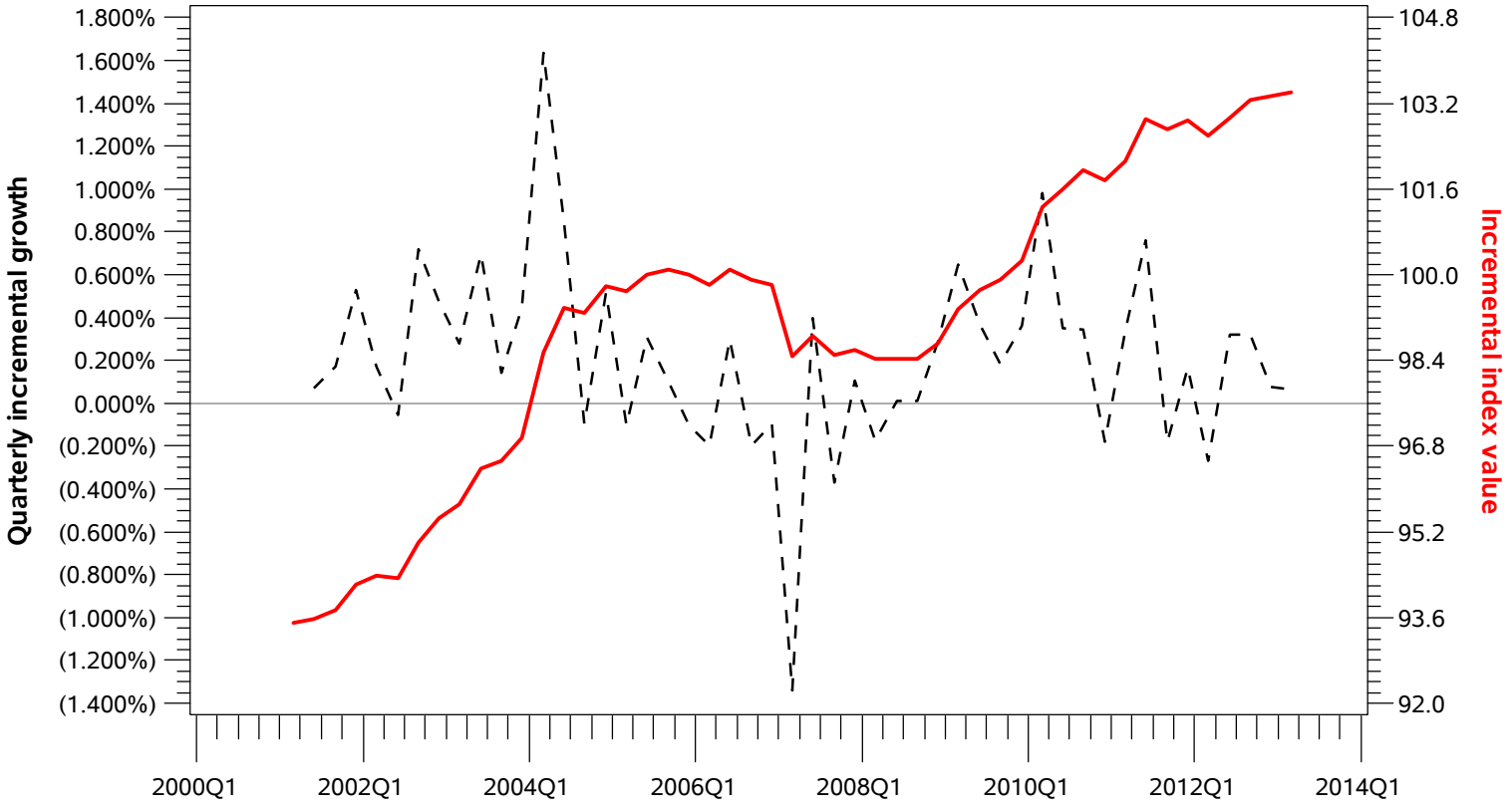


Table 65. Wages and Salaries, Private Industry: All union workers

LABSTAT series identifier: CIU2020000000510I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-52.7618	Z_{Tau}	-7.4367
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0482	AR(1) coefficient	0.1078
Standard error	0.0376	Standard error	0.1466
t-statistic	1.2826	t-statistic	0.7355
Probability t	0.2061	Durbin-Watson	1.9381

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.193%

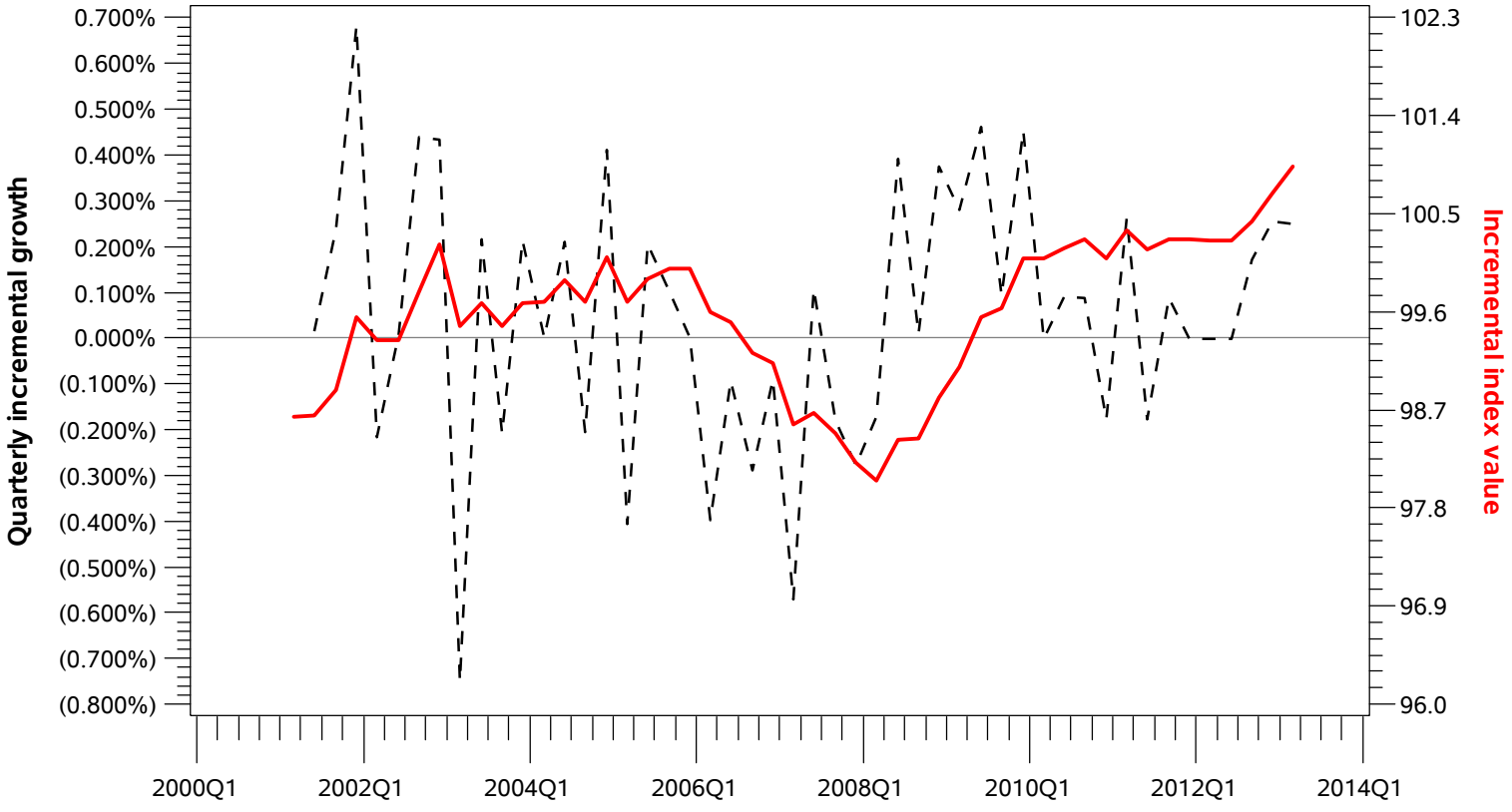


Table 66. Benefits, Private Industry: All union workers

LABSTAT series identifier: CIU2030000000510I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-40.4786	Z_{Tau}	-5.8657
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.4874	AR(1) coefficient	-0.1282
Standard error	0.1719	Standard error	0.1462
t-statistic	2.8350	t-statistic	-0.8770
Probability t	0.0068	Durbin-Watson	2.0282

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 1.964%

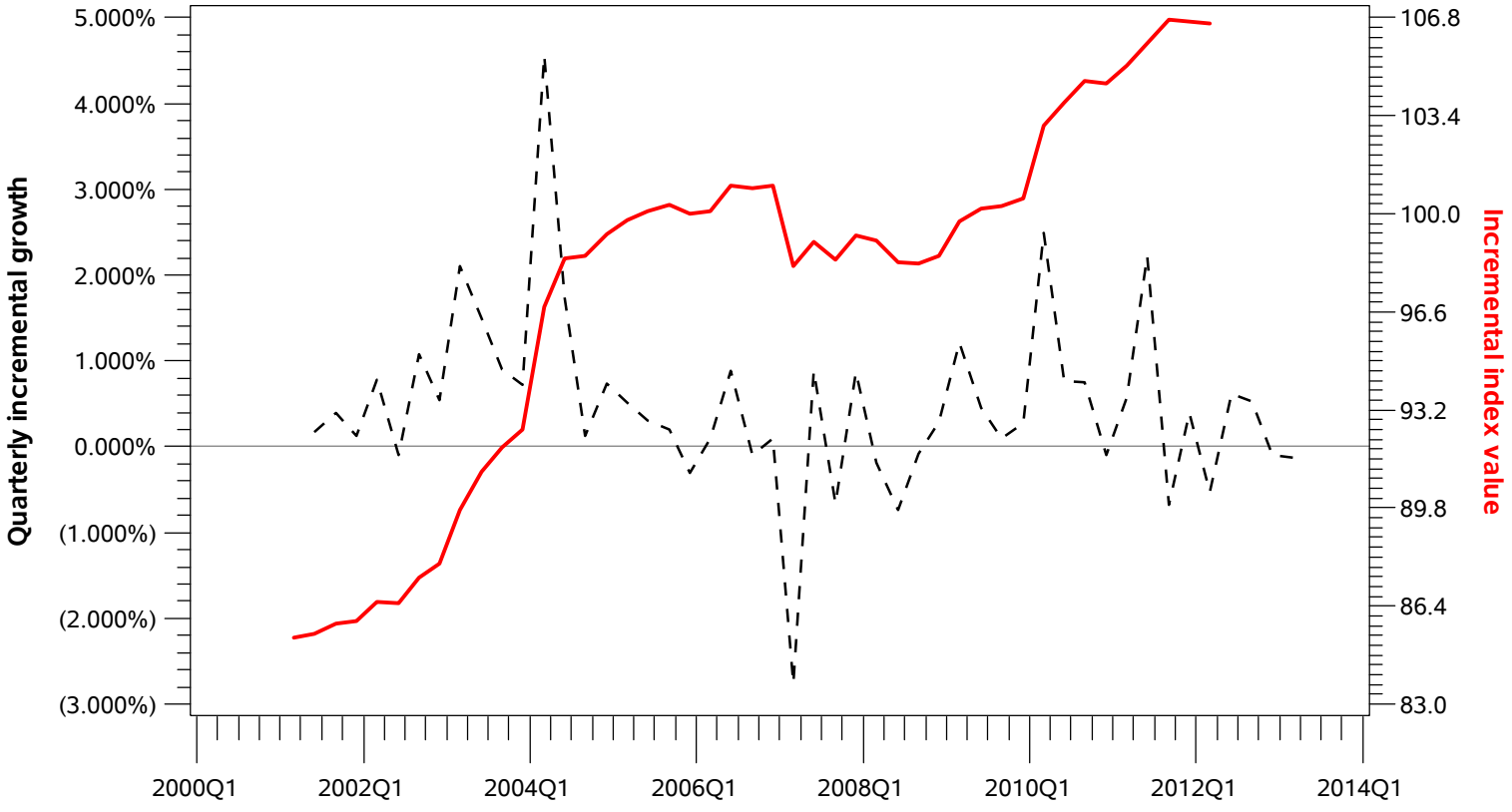


Table 67. Total Compensation, State & Local Govt: All workers

LABSTAT series identifier: CIU3010000000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-120.9234	Z_{Tau}	-12.7501
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1269	AR(1) coefficient	0.1697
Standard error	0.0527	Standard error	0.0940
t-statistic	2.4070	t-statistic	1.8057
Probability t	0.0178	Durbin-Watson	2.0584

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.509%

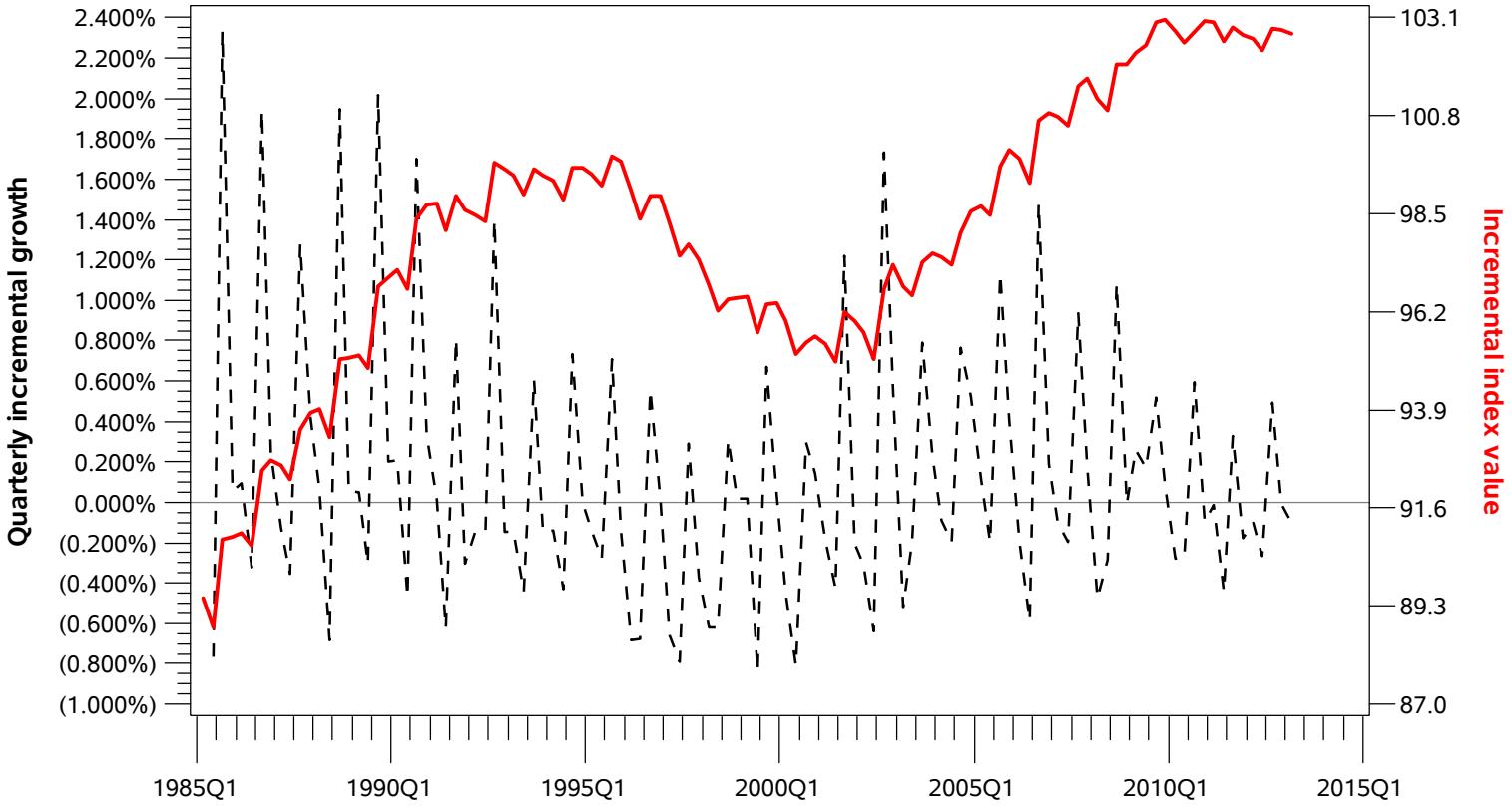


Table 68. Wages and Salaries, State & Local Govt: All workers

LABSTAT series identifier: CIU3020000000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-120.9091	Z_{Tau}	-13.7638
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0391	AR(1) coefficient	0.2190
Standard error	0.0512	Standard error	0.0930
t-statistic	0.7634	t-statistic	2.3537
Probability t	0.4468	Durbin-Watson	2.1175

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.157%

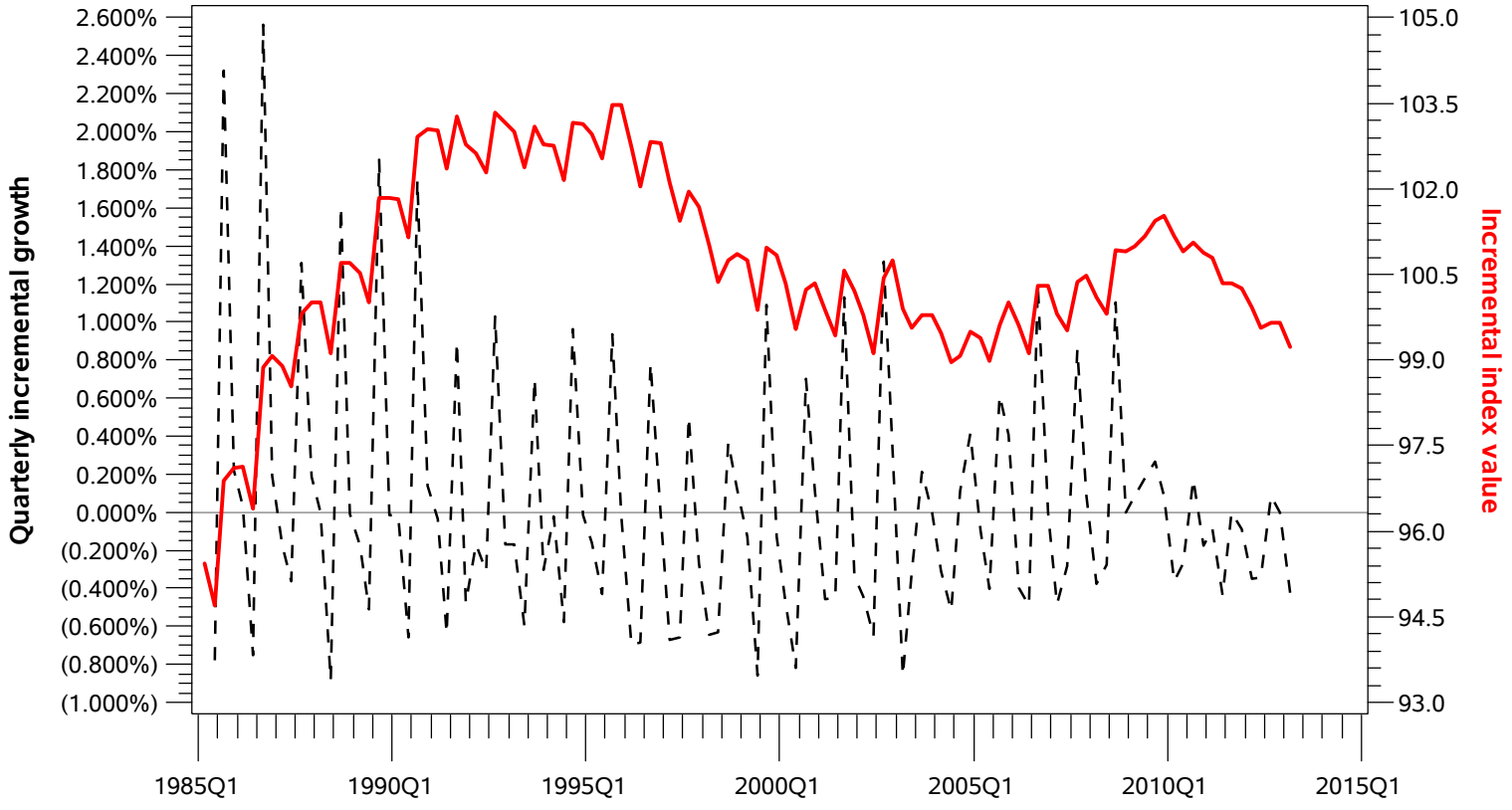


Table 69. Benefits, State & Local Govt: All workers

LABSTAT series identifier: CIU3030000000000I

Historical data period: JUN-1989 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-88.9756	Z_{Tau}	-9.6655
Prob Z_{Rho}	0.0009	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.2862	AR(1) coefficient	-0.0473
Standard error	0.0880	Standard error	0.1036
t-statistic	3.2537	t-statistic	-0.4569
Probability t	0.0016	Durbin-Watson	1.9098

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 1.150%

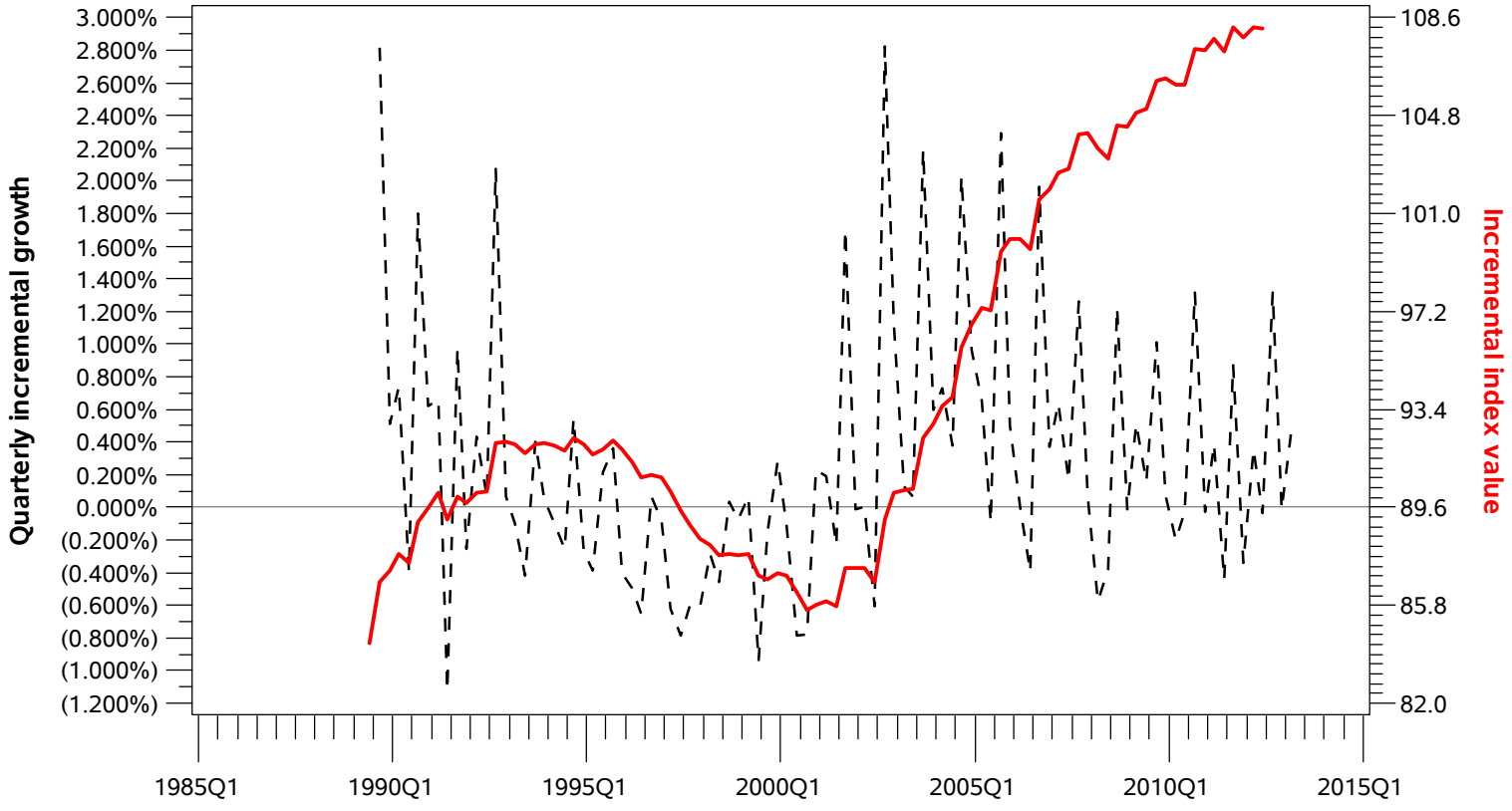


Table 70. Total Compensation, State & Local Govt: Professional and related

LABSTAT series identifier: CIU3010000120000I
Historical data period: JUN-1989 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-102.6971	Z_{Tau}	-11.6969
Prob Z_{Rho}	0.0009	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0569	AR(1) coefficient	0.1172
Standard error	0.0671	Standard error	0.1030
t-statistic	0.8473	t-statistic	1.1376
Probability t	0.3990	Durbin-Watson	1.9341

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.228%

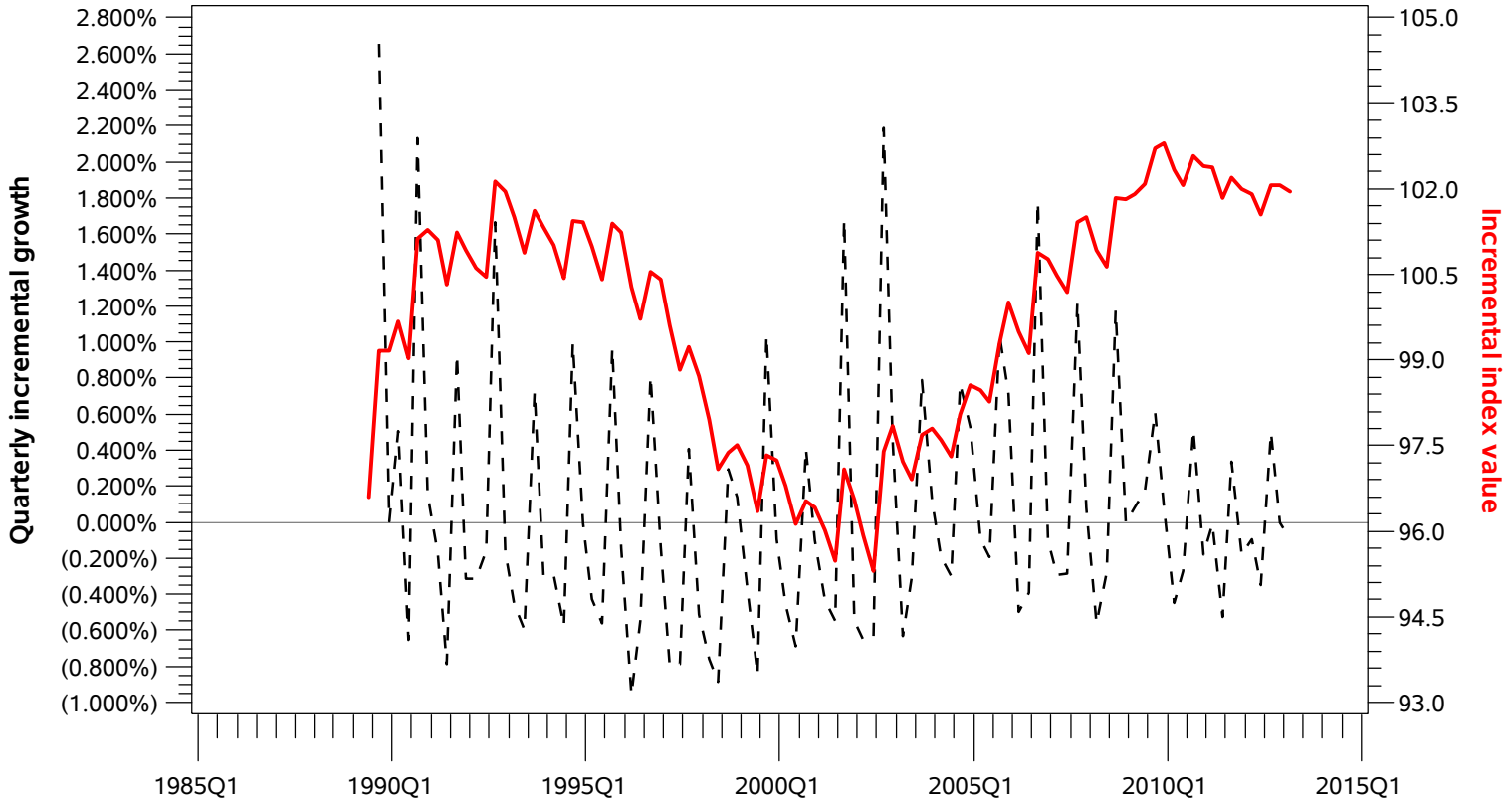


Table 71. Wages and Salaries, State & Local Govt: Professional and related

LABSTAT series identifier: CIU3020000120000I

Historical data period: JUN-1989 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-104.0690	Z_{Tau}	-12.0083
Prob Z_{Rho}	0.0009	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	-0.0118	AR(1) coefficient	0.1423
Standard error	0.0648	Standard error	0.1026
t-statistic	-0.1824	t-statistic	1.3860
Probability t	0.8556	Durbin-Watson	1.9854

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: (0.047%)

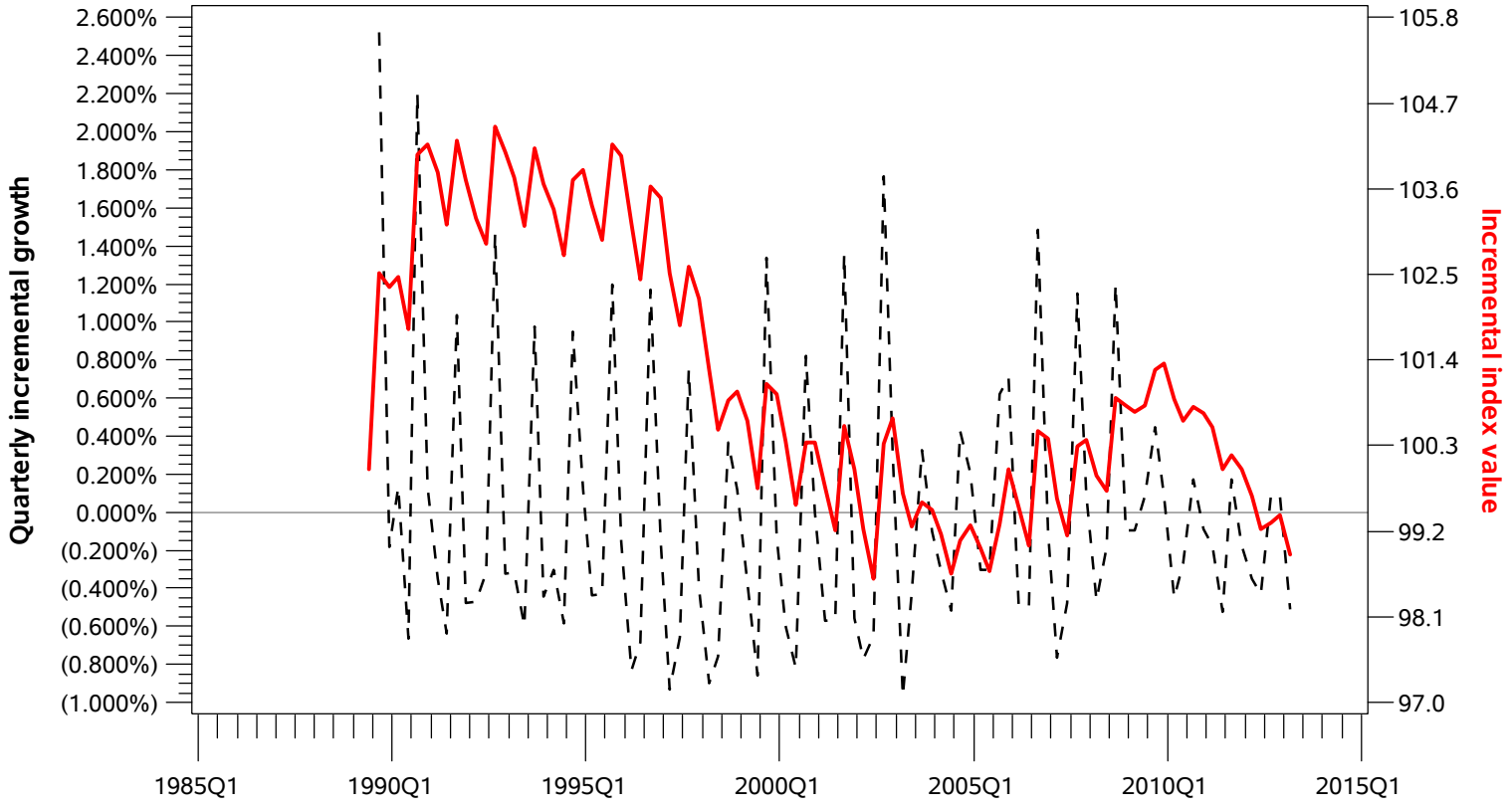


Table 72. Total Compensation, State & Local Govt: Office and administrative support

LABSTAT series identifier: CIU3010000220000I

Historical data period: JUN-1989 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-105.2760	Z_{Tau}	-11.5119
Prob Z_{Rho}	0.0009	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1051	AR(1) coefficient	0.1304
Standard error	0.0490	Standard error	0.1028
t-statistic	2.1460	t-statistic	1.2681
Probability t	0.0345	Durbin-Watson	1.9306

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.421%

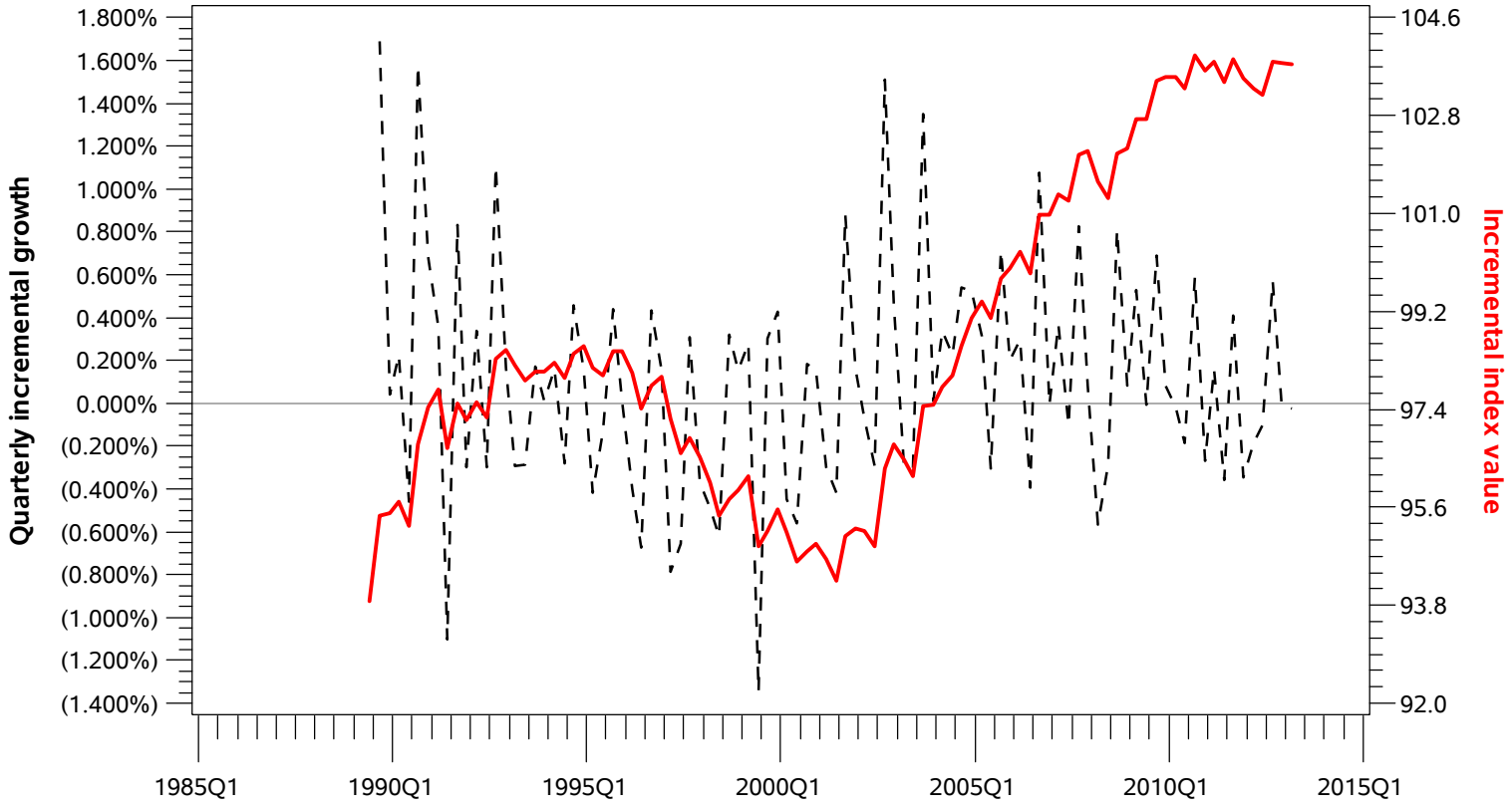


Table 73. Wages and Salaries, State & Local Govt: Office and administrative support

LABSTAT series identifier: CIU3020000220000I

Historical data period: JUN-1989 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-111.0543	Z_{Tau}	-12.5330
Prob Z_{Rho}	0.0009	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	-0.0294	AR(1) coefficient	0.2098
Standard error	0.0397	Standard error	0.1014
t-statistic	-0.7415	t-statistic	2.0694
Probability t	0.4603	Durbin-Watson	2.0355

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: (0.118%)

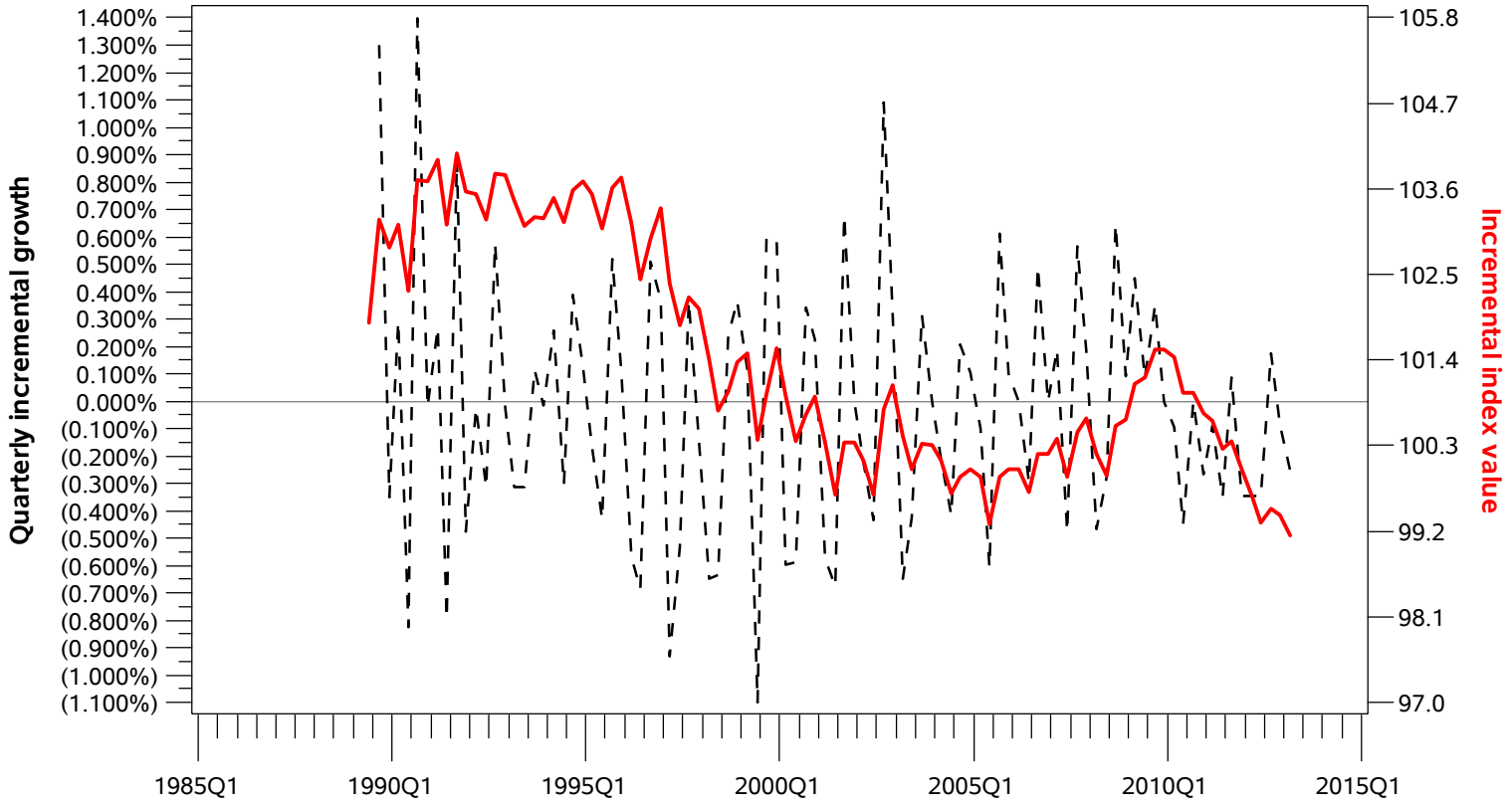


Table 74. Total Compensation, State & Local Govt: Service occupations

LABSTAT series identifier: CIU3010000300000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-127.7064	Z_{Tau}	-12.8865
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1790	AR(1) coefficient	0.1869
Standard error	0.0445	Standard error	0.0937
t-statistic	4.0178	t-statistic	1.9951
Probability t	0.0001	Durbin-Watson	2.0234

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.718%

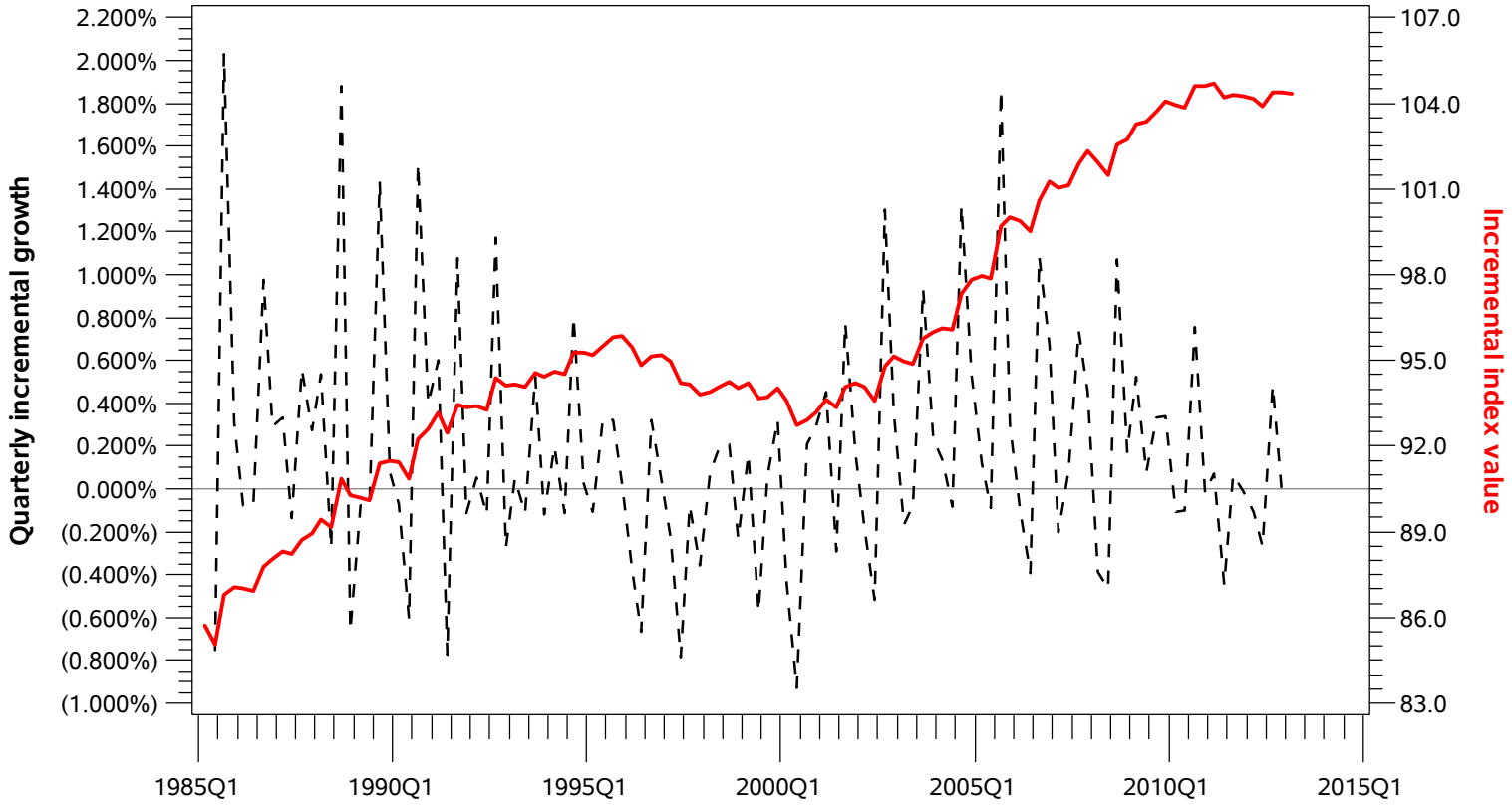


Table 75. Wages and Salaries, State & Local Govt: Service occupations

LABSTAT series identifier: CIU3020000300000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-124.8225	Z_{Tau}	-13.2696
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0602	AR(1) coefficient	0.1982
Standard error	0.0425	Standard error	0.0935
t-statistic	1.4171	t-statistic	2.1203
Probability t	0.1593	Durbin-Watson	2.0636

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.241%

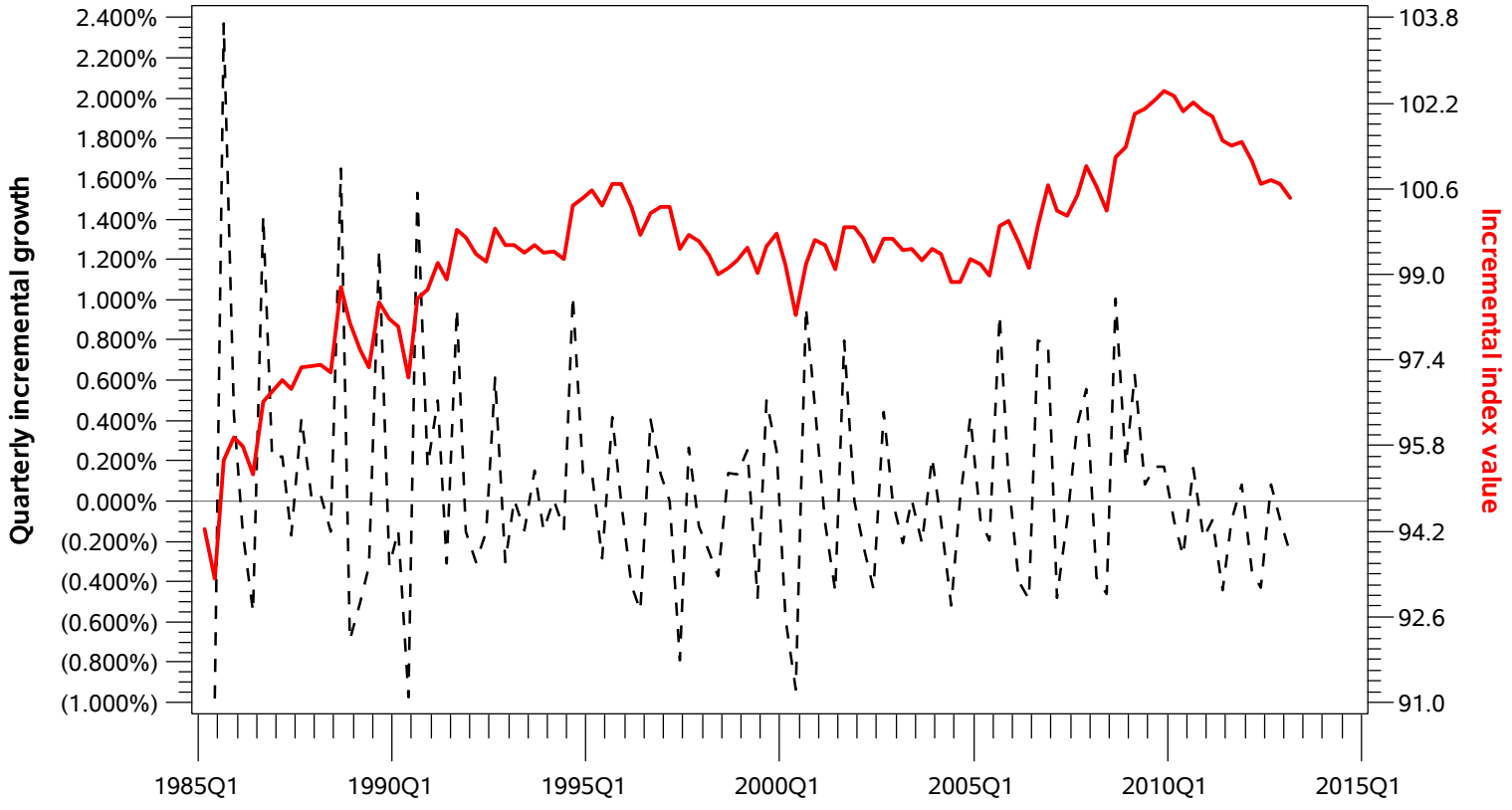


Table 76. Total Compensation, State & Local Govt: Education services

LABSTAT series identifier: CIU3016100000000I

Historical data period: MAR-1989 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-108.9123	Z_{Tau}	-11.4777
Prob Z_{Rho}	0.0009	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0540	AR(1) coefficient	0.1666
Standard error	0.0709	Standard error	0.1017
t-statistic	0.7615	t-statistic	1.6386
Probability t	0.4482	Durbin-Watson	2.1263

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.216%

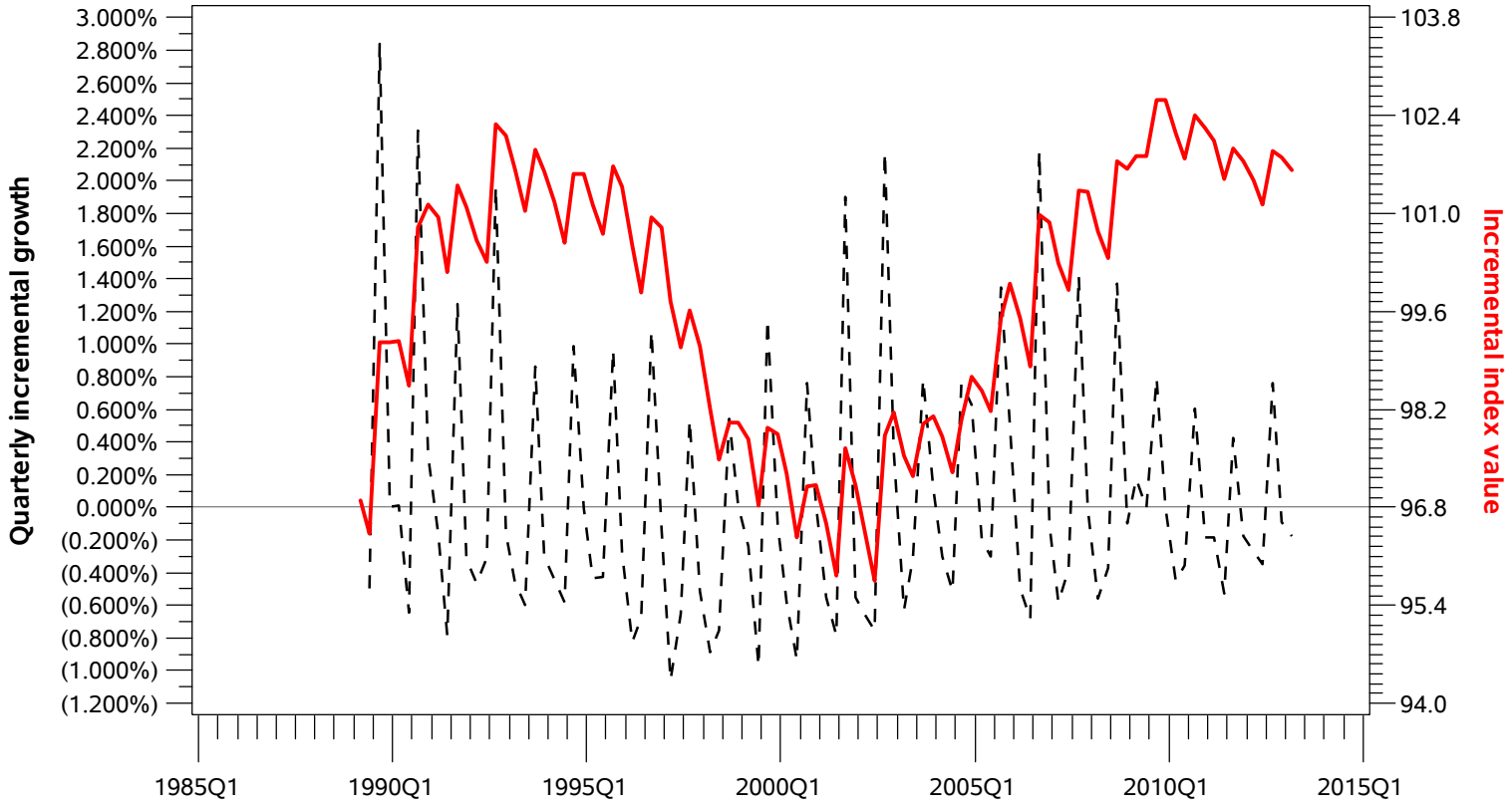


Table 77. Wages and Salaries, State & Local Govt: Education services

LABSTAT series identifier: CIU3026100000000I

Historical data period: MAR-1989 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-109.6737	Z_{Tau}	-11.6958
Prob Z_{Rho}	0.0009	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	-0.0200	AR(1) coefficient	0.1824
Standard error	0.0688	Standard error	0.1014
t-statistic	-0.2908	t-statistic	1.7990
Probability t	0.7719	Durbin-Watson	2.1657

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: (0.080%)

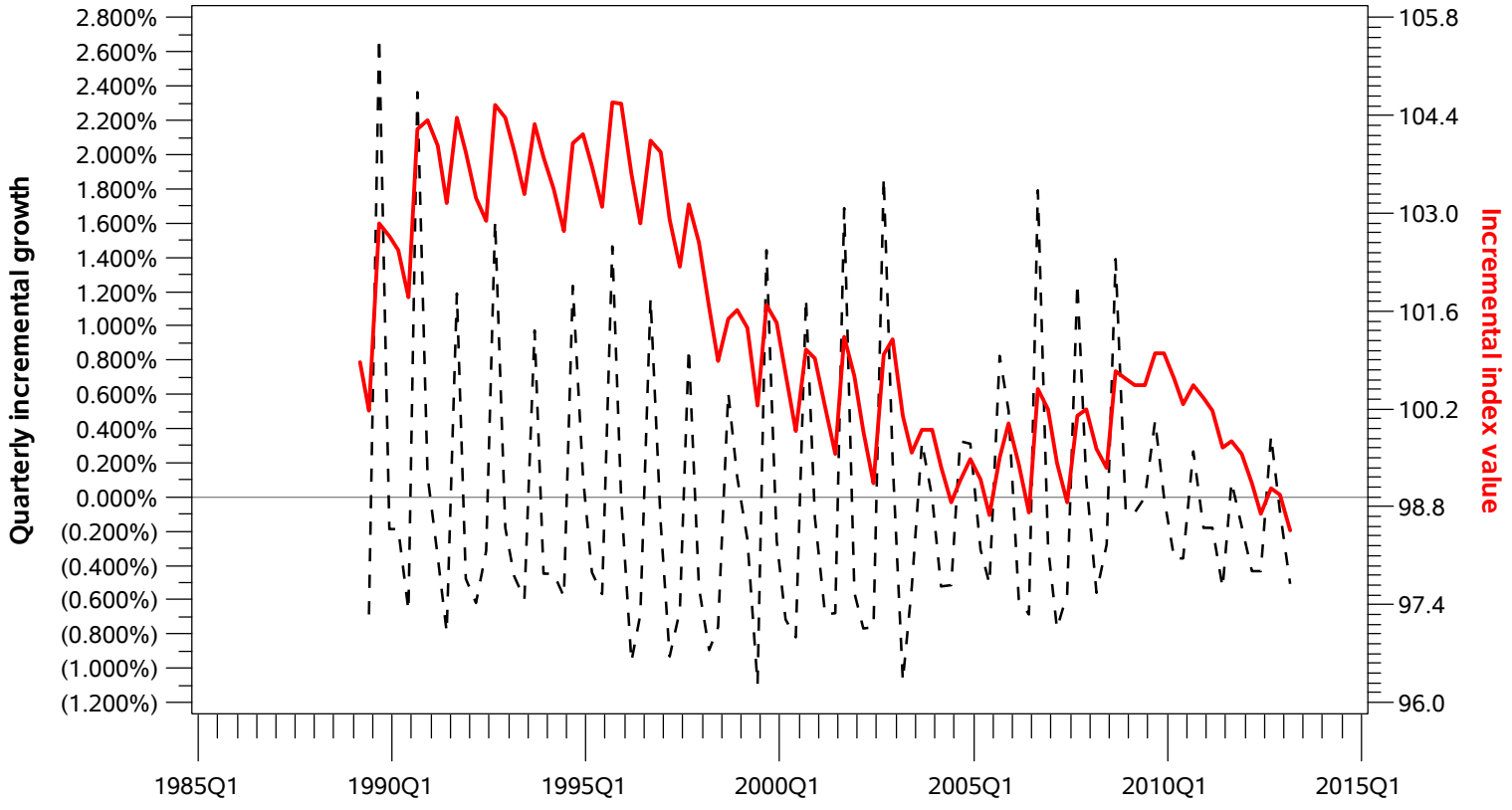


Table 78. Total Compensation, State & Local Govt: Schools

LABSTAT series identifier: CIU3016105000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-112.0909	Z_{Tau}	-13.0099
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1228	AR(1) coefficient	0.1652
Standard error	0.0761	Standard error	0.0940
t-statistic	1.6150	t-statistic	1.7568
Probability t	0.1092	Durbin-Watson	2.1147

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.492%

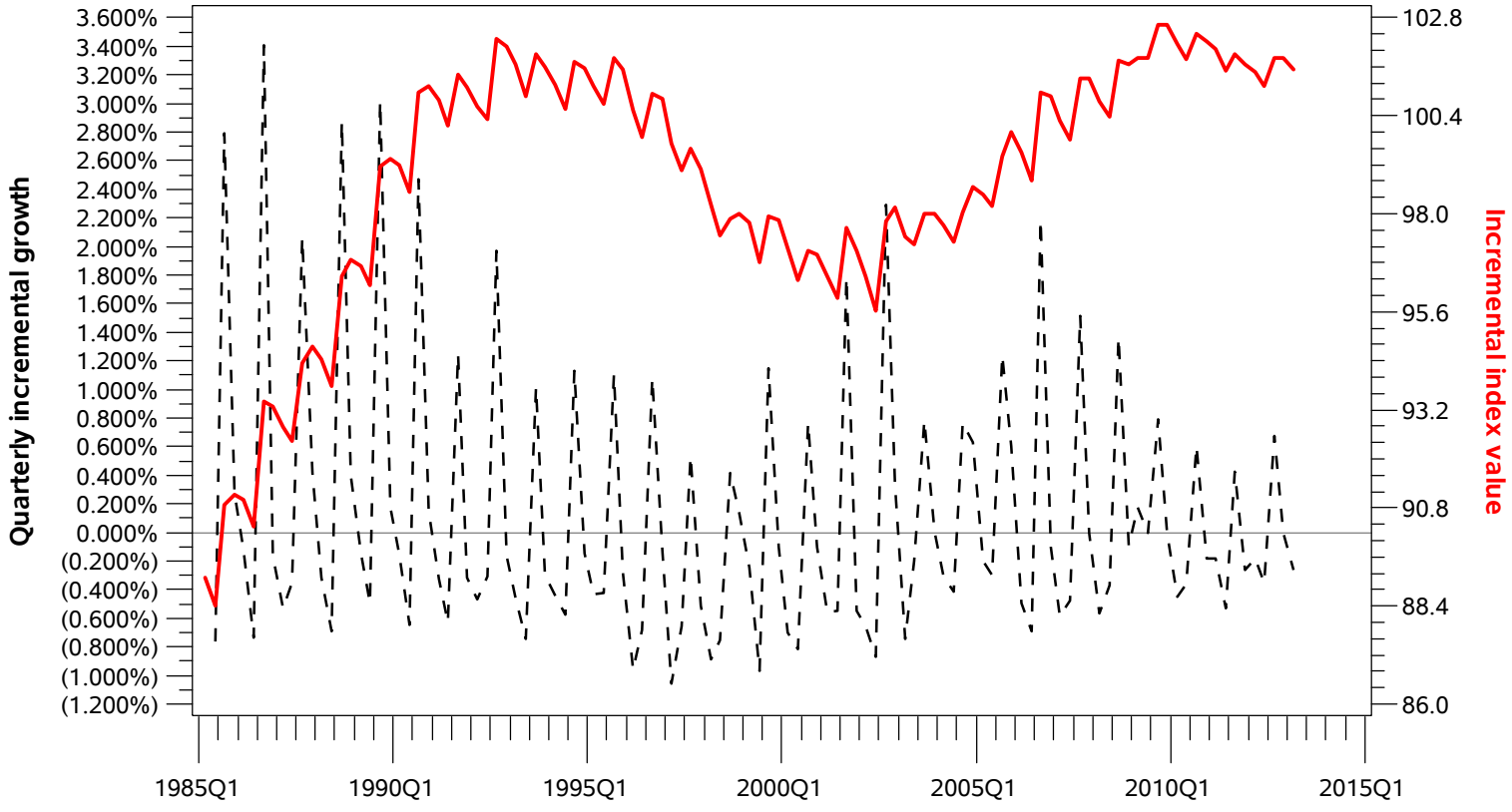


Table 79. Wages and Salaries, State & Local Govt: Schools

LABSTAT series identifier: CIU3026105000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-110.8980	Z_{Tau}	-13.4780
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0511	AR(1) coefficient	0.1816
Standard error	0.0754	Standard error	0.0938
t-statistic	0.6778	t-statistic	1.9367
Probability t	0.4993	Durbin-Watson	2.1462

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.205%

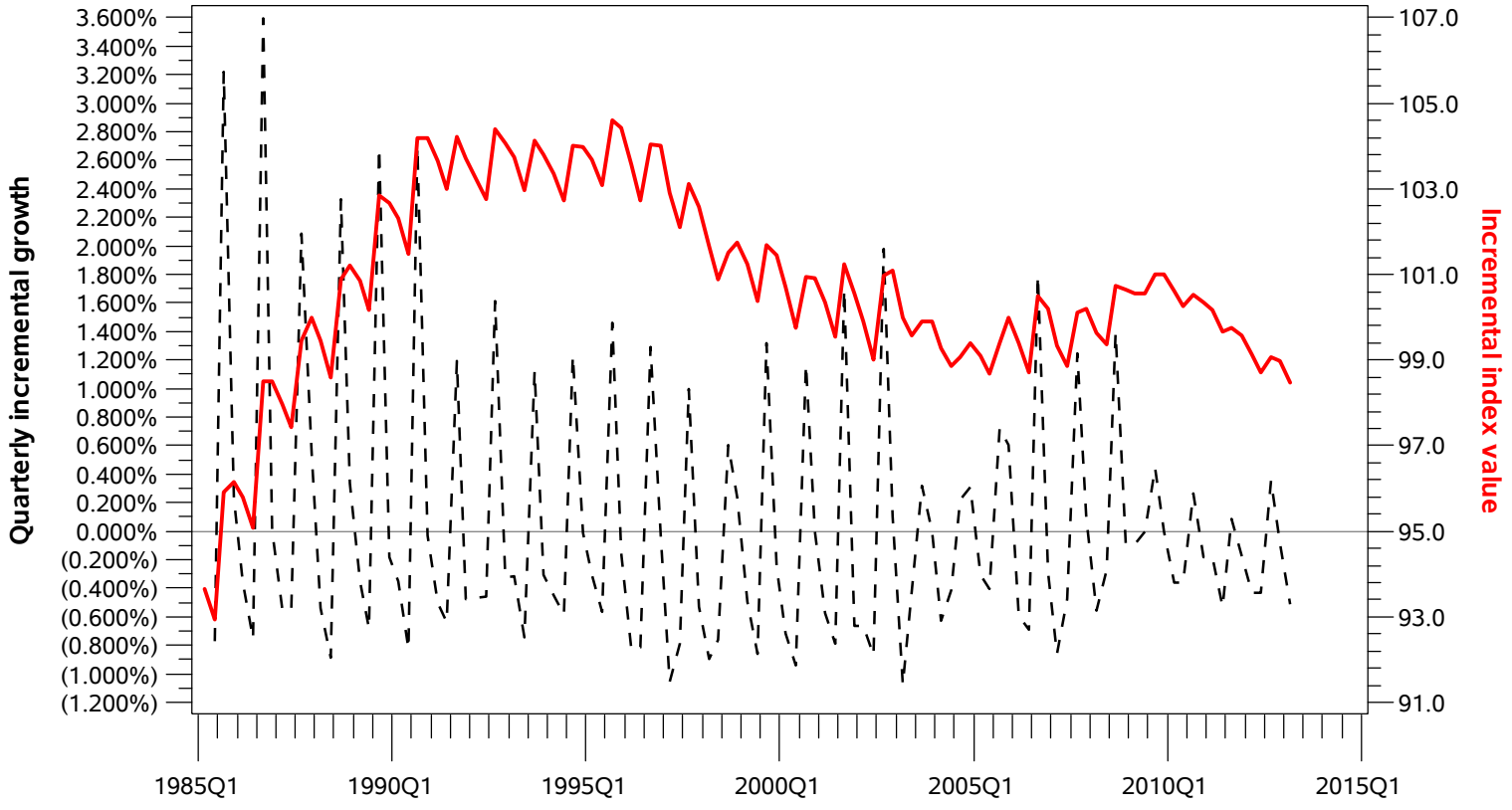


Table 80. Total Compensation, State & Local Govt: Elementary and secondary schools

LABSTAT series identifier: CIU3016110000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-107.7300	Z_{Tau}	-12.4913
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1233	AR(1) coefficient	0.1310
Standard error	0.0854	Standard error	0.0945
t-statistic	1.4431	t-statistic	1.3858
Probability t	0.1518	Durbin-Watson	2.1005

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.494%

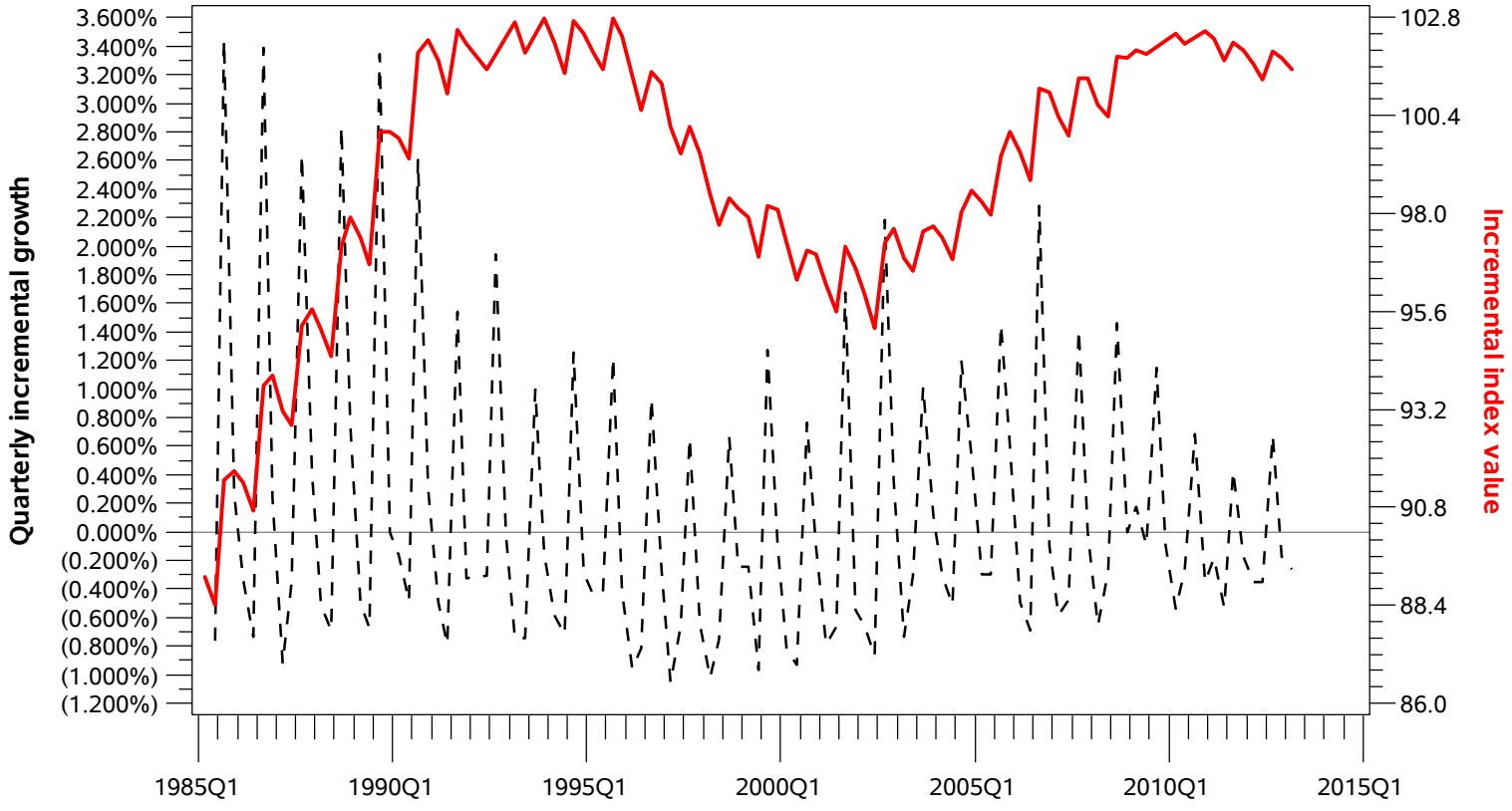


Table 81. Wages and Salaries, State & Local Govt: Elementary and secondary schools

LABSTAT series identifier: CIU3026110000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-108.7810	Z_{Tau}	-13.2555
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0504	AR(1) coefficient	0.1673
Standard error	0.0837	Standard error	0.0940
t-statistic	0.6025	t-statistic	1.7802
Probability t	0.5481	Durbin-Watson	2.1412

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.202%

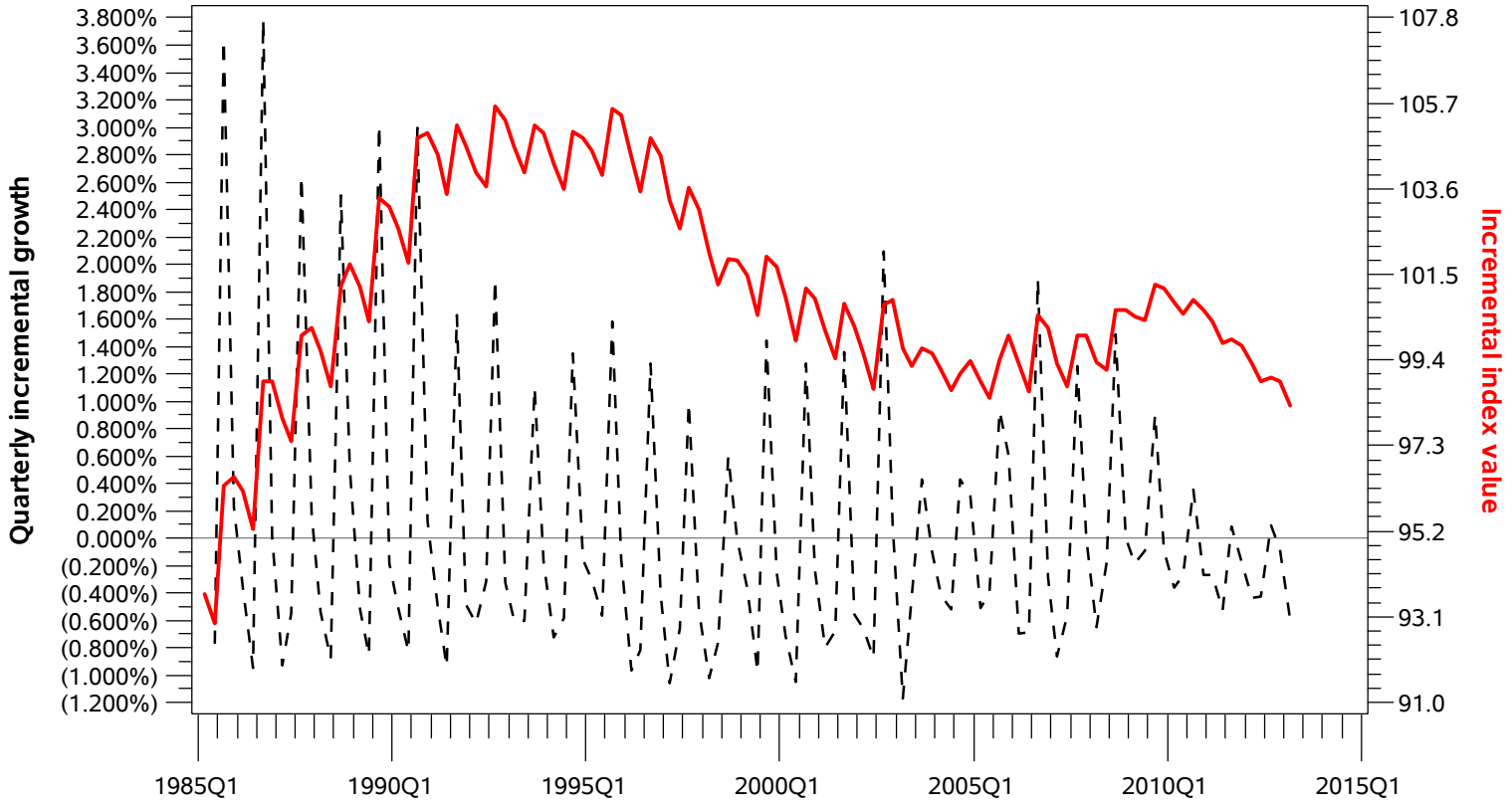


Table 82. Total Compensation, State & Local Govt: Health care and social assistance

LABSTAT series identifier: CIU3016200000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-52.7233	Z_{Tau}	-7.6924
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.2064	AR(1) coefficient	0.1343
Standard error	0.0557	Standard error	0.1461
t-statistic	3.7049	t-statistic	0.9193
Probability t	0.0006	Durbin-Watson	2.0346

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.828%

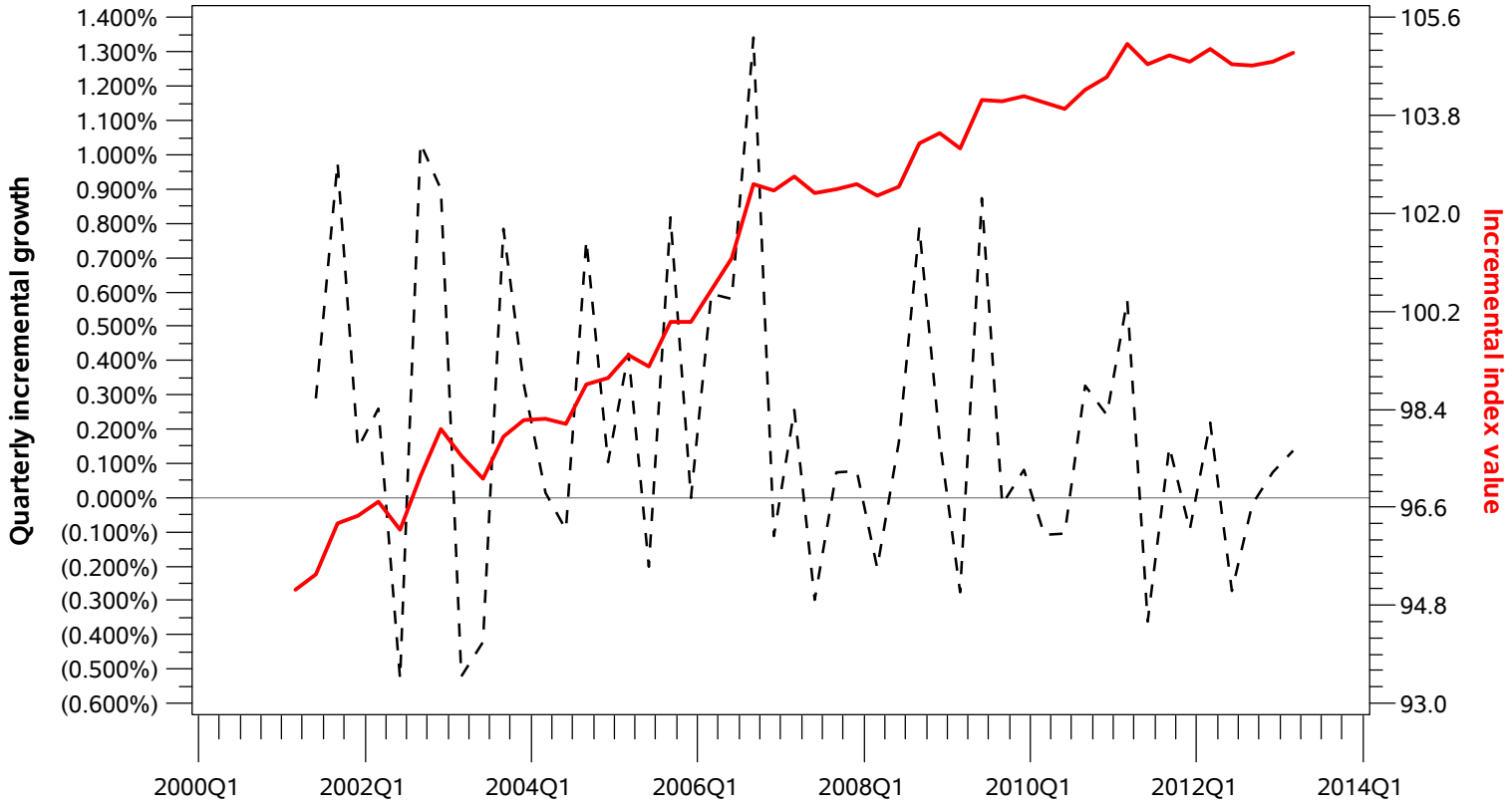


Table 83. Wages and Salaries, State & Local Govt: Health care and social assistance

LABSTAT series identifier: CIU3026200000000I

Historical data period: MAR-2001 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-45.3654	Z_{Tau}	-6.4711
Prob Z_{Rho}	0.0004	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0866	AR(1) coefficient	-0.0338
Standard error	0.0628	Standard error	0.1474
t-statistic	1.3782	t-statistic	-0.2292
Probability t	0.1748	Durbin-Watson	1.9887

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.347%

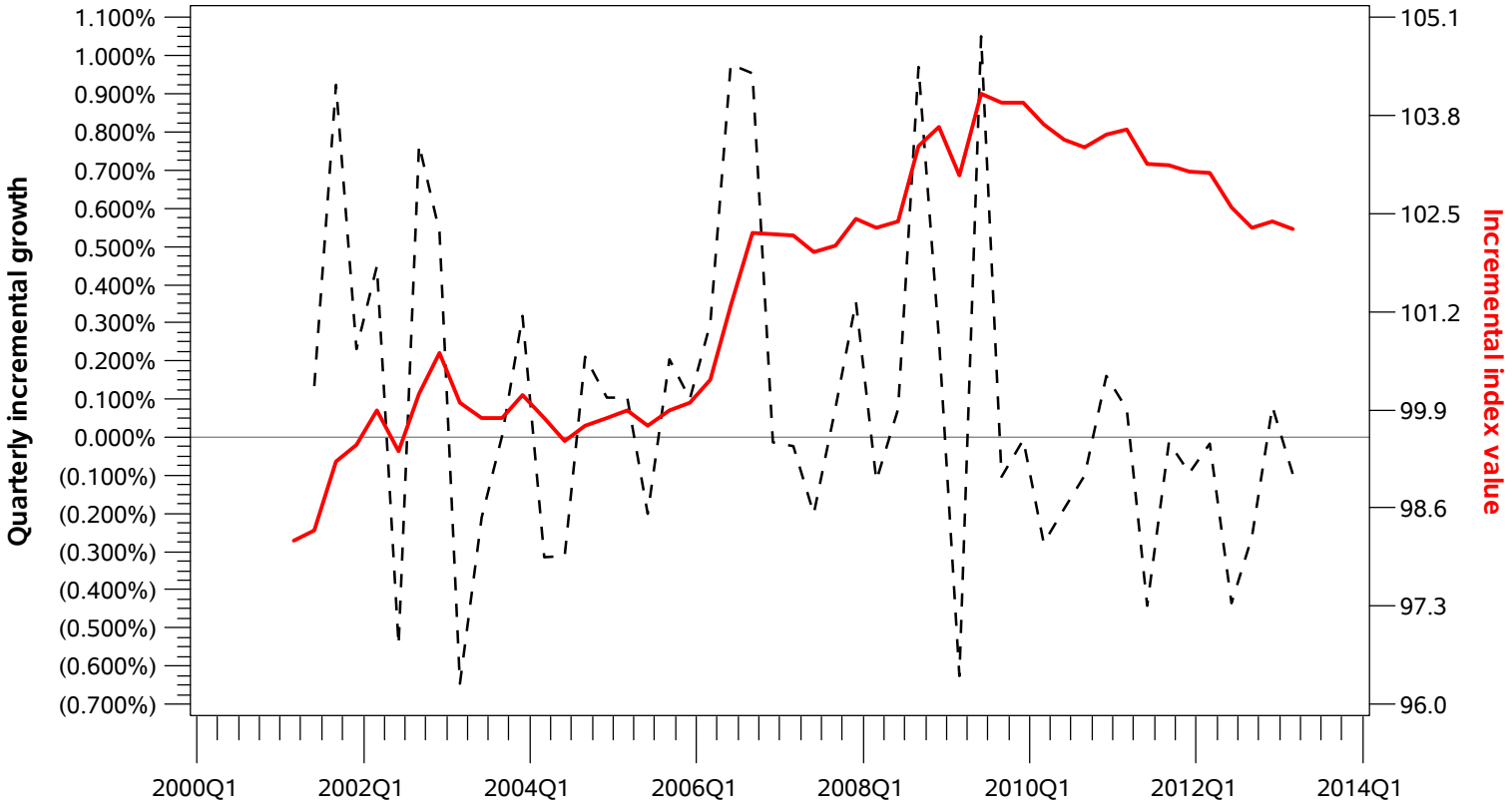


Table 84. Total Compensation, State & Local Govt: Hospitals

LABSTAT series identifier: CIU3016220000000I

Historical data period: MAR-1988 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-91.3618	Z_{Tau}	-9.8212
Prob Z_{Rho}	0.0009	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1269	AR(1) coefficient	-0.0055
Standard error	0.0558	Standard error	0.1010
t-statistic	2.2737	t-statistic	-0.0543
Probability t	0.0252	Durbin-Watson	1.9956

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.509%

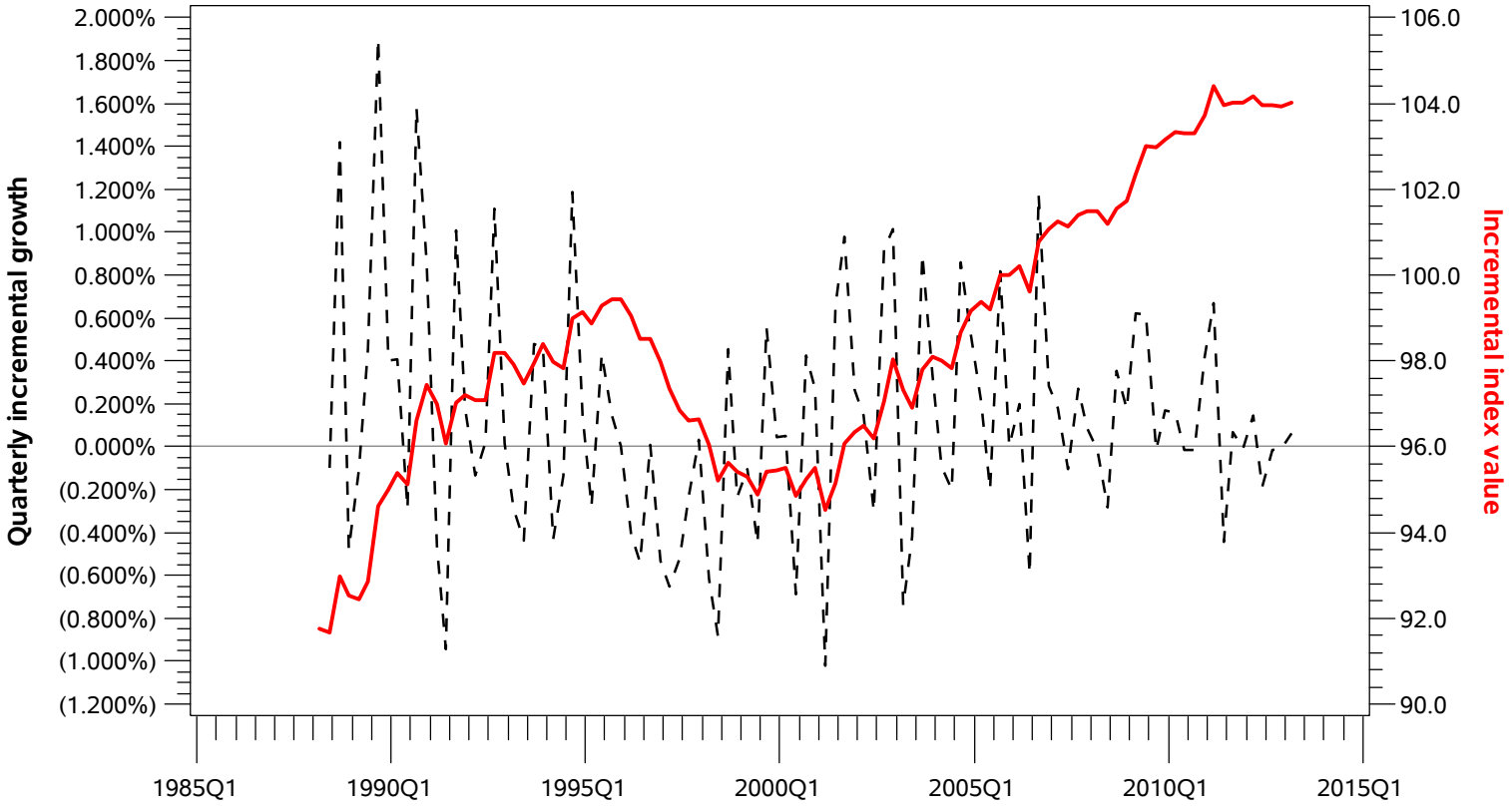


Table 85. Wages and Salaries, State & Local Govt: Hospitals

LABSTAT series identifier: CIU3026220000000I

Historical data period: MAR-1988 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-93.4434	Z_{Tau}	-10.3279
Prob Z_{Rho}	0.0009	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0599	AR(1) coefficient	0.0381
Standard error	0.0477	Standard error	0.1009
t-statistic	1.2553	t-statistic	0.3777
Probability t	0.2124	Durbin-Watson	2.0196

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.240%

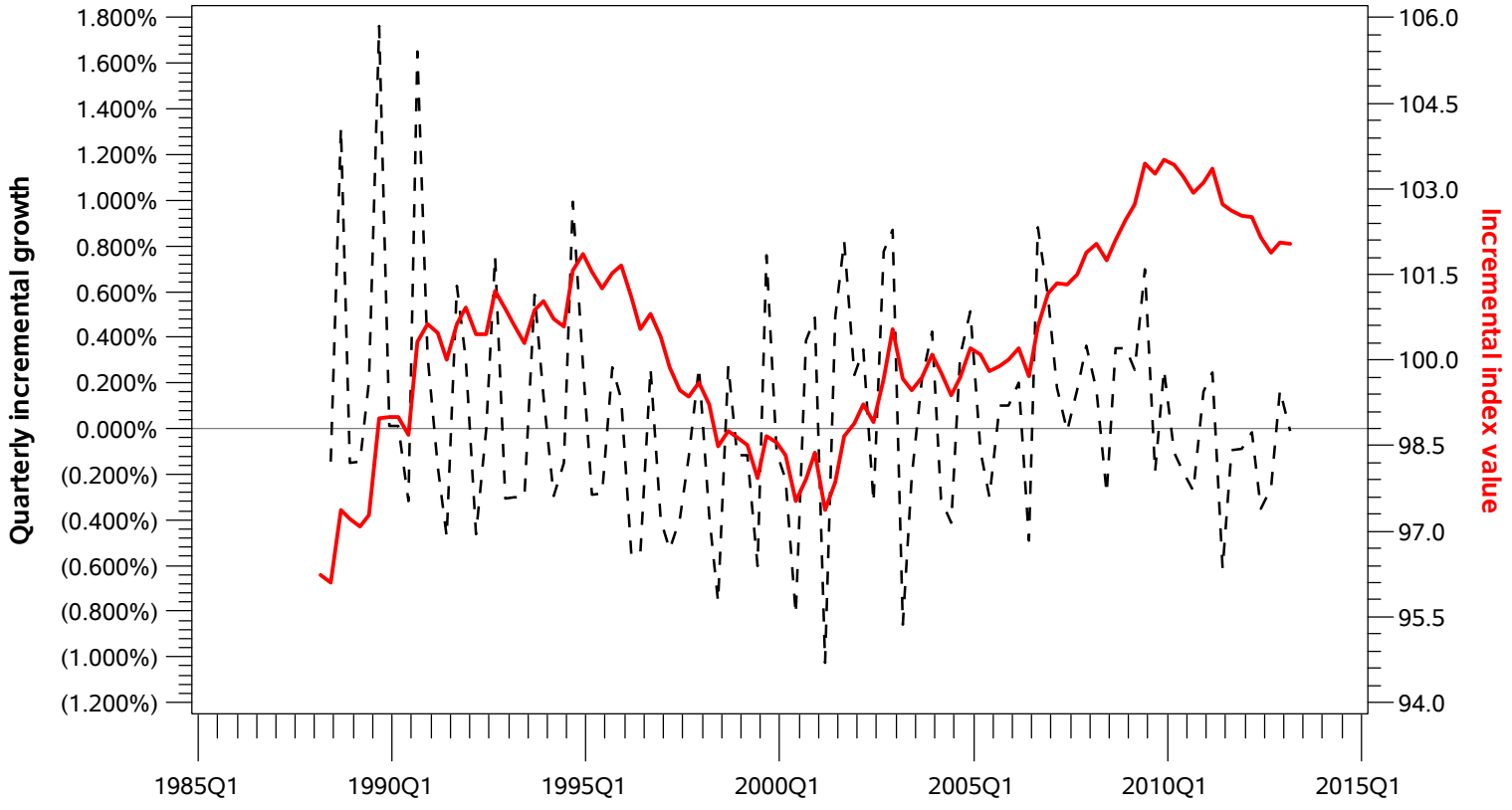


Table 86. Total Compensation, State & Local Govt: Public administration

LABSTAT series identifier: CIU3019200000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-147.7230	Z_{Tau}	-13.2403
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.1350	AR(1) coefficient	0.2369
Standard error	0.0372	Standard error	0.0926
t-statistic	3.6275	t-statistic	2.5575
Probability t	0.0004	Durbin-Watson	1.8866

H_0: $\mu = 0$, Reject null hypothesis

Estimated incremental annual growth rate: 0.541%

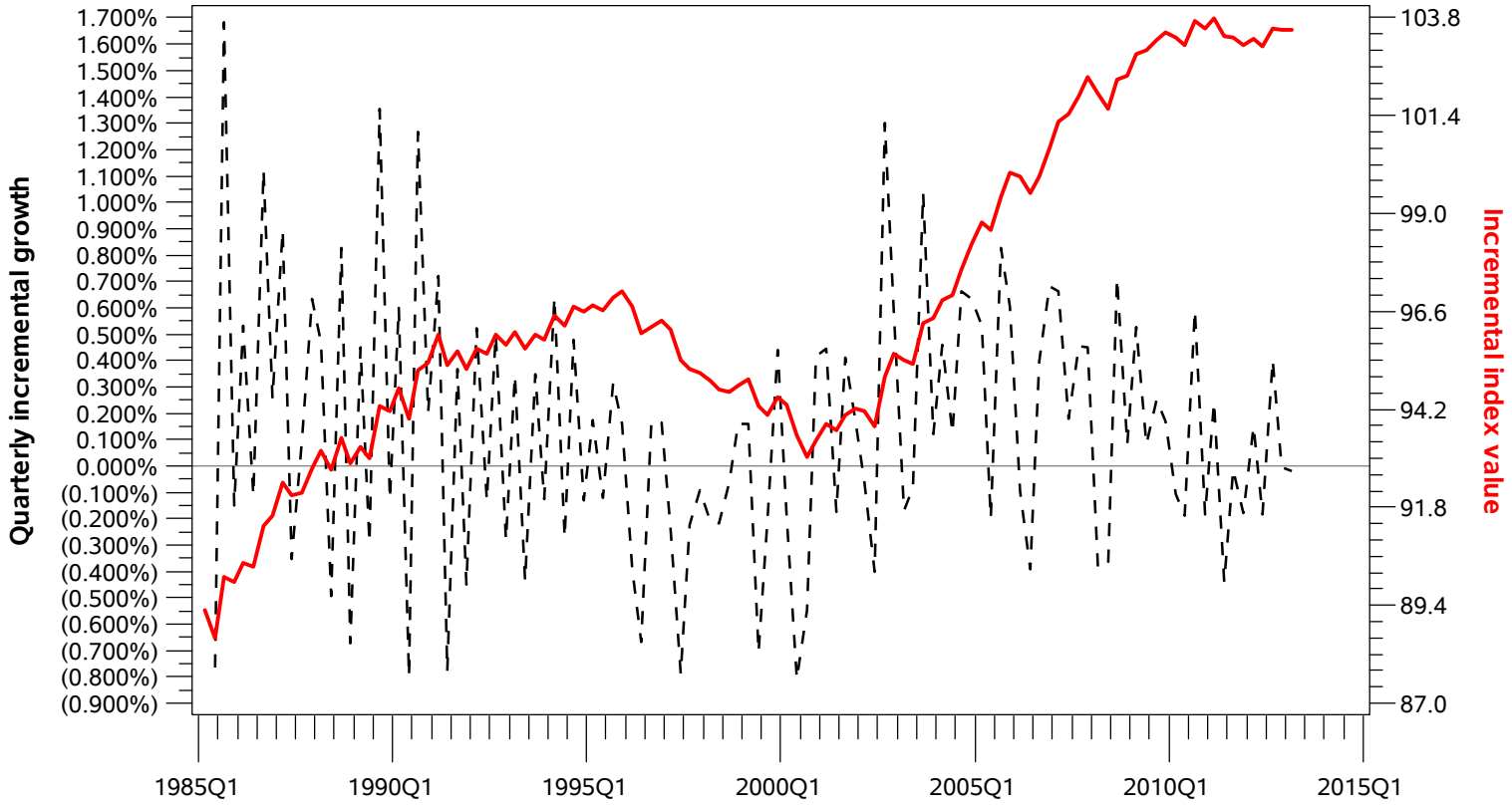


Table 87. Wages and Salaries, State & Local Govt: Public administration

LABSTAT series identifier: CIU3029200000000I

Historical data period: MAR-1985 to MAR-2013 (Quarterly)

Incremental Growth Analysis: Specific ECI over the ECI Wages and Salaries of All Private Workers

Phillips-Perron single mean stationarity test statistic

$$y_t = \mu + \rho\, y_{t-1} + u_t$$

Z_{Rho}	-148.5177	Z_{Tau}	-14.3226
Prob Z_{Rho}	0.0010	Prob Z_{Tau}	0.0001

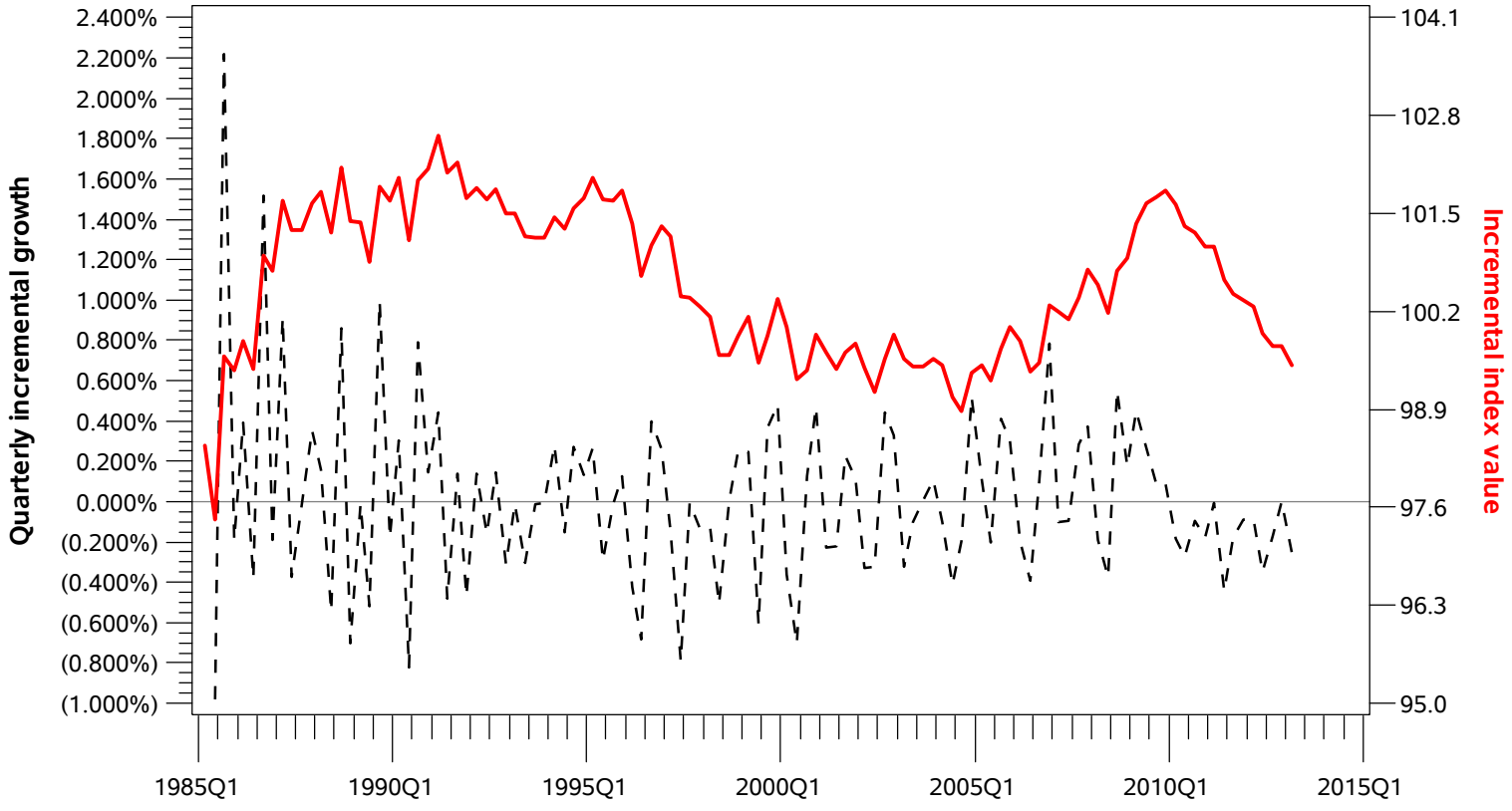
Yule-Walker Parameter Estimates AR(1)

$$y_t = \mu + v_t$$
$$v_t = \varepsilon_t - \psi_1\, v_{t-1}$$

	Mean Quarterly Growth Rate %		AR(1) Parameter
Intercept	0.0133	AR(1) coefficient	0.2965
Standard error	0.0317	Standard error	0.0911
t-statistic	0.4202	t-statistic	3.2557
Probability t	0.6752	Durbin-Watson	1.9543

H_0: $\mu = 0$, Fail to reject null hypothesis

Estimated incremental annual growth rate: 0.053%



Investigators

Kurt V. Krueger, Ph.D. Principal Investigator
Gary R. Albrecht, Ph.D. Investigator

Dr. Krueger is the Managing Editor of the *Journal of Forensic Economics* and he is the current President of the National Association of Forensic Economics.

Dr. Albrecht is a past Vice President of the National Association of Forensic Economics. Dr. Albrecht's economic consulting firm, Albrecht Economics, is located in Winston-Salem, NC.

Data Availability

The Bureau of Labor Statistics (BLS) publishes the Employment Cost Index (ECI) data at their Internet site ftp://ftp.bls.gov/pub/time.series/ci/. The forecasts of Moody's Analytics can be obtained by order from their Internet site http://Economy.com.

Expectancy Data

Economic Demographers

ExpectancyData.com
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1-913-381-9420

Incremental Labor Cost Growth: 2013Q2

Employment Cost Index Analysis