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The Marginal Efficiency of Labor

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Abstract

Drawing on Keynes's concept of Marginal Efficiency of Capital (MEC), this article introduces the Marginal Efficiency of Labor (MEL) as an expectations-based valuation metric for understanding labor demand under uncertainty. MEL is defined as the internal rate of return on labor investment, reflecting firms' expectations about the realizable monetary value of labor's output relative to its full cost. Unlike the marginal product of labor (MPL), MEL treats labor as an intertemporal asset and incorporates demand-side constraints via an expected realizability factor, thereby endogenizing firms' hiring decisions to future sales prospects. To make MEL operational, the article derives a Tobin-style q for labor—a forward-looking ratio that expresses the profitability of hiring labor relative to its cost, mirroring the investment logic used for capital. The article formally develops MEL, compares it with classical labor demand, and shows how it explains persistent underemployment equilibria even under real wage flexibility. MEL offers a testable empirical agenda and a structural foundation for modeling hiring behavior in modern Keynesian macroeconomics.

Key words: Effective demand; Labor supply and demand; Marginal product of capital and labor; Realizability factor; Tobin's q for labor.

JEL Codes: D21; E22; E24; E32; J23.

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1. Intrduction[1]

In *The General Theory of Employment, Interest and Money* (1936), John Maynard Keynes overturned the classical theory of employment by rejecting the view that labor markets naturally clear through wage adjustment. While he accepted the classical first postulate—that firms hire labor up to the point where the real wage equals the marginal product of labor (MPL)—he showed that this condition could not guarantee full employment in a demand-constrained economy.

Keynes, in fact, rejected the second postulate of classical theory, whereby the utility of the wage when a given volume of labor is employed is equal to the marginal disutility of that amount of employment, which implied that workers choose not to work if wages are too low, and that unemployment is voluntary. He showed that in real economies many workers are involuntarily unemployed not because wages are too low to entice them to work, but because there are not enough jobs due to insufficient demand.

Keynes's central innovation, as is well known, was the principle of effective demand, which holds that firms produce only what they expect to sell. Yet Keynes did not fully integrate this principle into the labor demand function itself. Expectations entered the model through investment and aggregate demand, but not through the logic of labor allocation. This disjunction generated a persistent asymmetry in Keynesian macroeconomics: capital is treated as an asset whose expected profitability drives its accumulation, whereas labor is treated as a variable input with no intertemporal valuation.

[1] I wish to thank my wife for her constant support.

This article addresses this theoretical gap by introducing the **Marginal Efficiency of Labor (MEL)** concept, defined as the internal rate of return on labor investment, in exact symmetry with Keynes's Marginal Efficiency of Capital (MEC). The MEL concept reinterprets labor as a forward-looking asset: a commitment of resources today that yields a stream of output tomorrow, the realizable value of which depends on firms' expectations about future sales.

Crucially, MEL differs from MPL in that it incorporates both expectations and effective demand constraints. In this context, the value of labor's output is weighted by the share that firms expect to sell. This distinction is important because a firm may not expect to sell all that it can produce, due to anticipated future demand shortages. This fundamentally differentiates the MPL, which is a technology-contingent variable, from the MEL, which is a demand-contingent variable. A firm would be justified in considering the two to be equivalent only under Say's Law.

By introducing an expected sales realizability factor, the labor demand decision is aligned with the same logic that Keynes applied to capital investment. Hiring becomes an intertemporal investment decision contingent on profitability, not merely a contemporaneous cost-minimization problem. This insight allows to reformulate the labor demand function in an effective-demand consistent fashion and hence complete Keynes's critique of classical employment theory.

The remainder of this article is structured as follows. Section 2 surveys the relevant literature and identifies the conceptual gap MEL addresses. Section 3 formally defines MEL by analogy with Keynes's MEC, introducing the expected realizability factor. Section 4 derives a new hiring condition based on MEL, while Section 5 extends MEL into a forward-looking Tobin's q for labor.

Section 6 contrasts MEL and labor-q-based hiring with traditional labor demand, while Section 7 situates the MEL framework within the broader macroeconomic and institutional context. Section 8 outlines a research agenda, identifying potential applications and testable implications. The final

section concludes by summarizing the contribution and emphasizing how MEL completes the theoretical departure from classical labor market theory initiated by Keynes.

2. Literature Foundations and the Path to MEL

Although the MEL concept has not yet been formally defined in the literature, several strands of economic thought offer essential building blocks—each contributing key insights while falling short of a unified, intertemporal, expectation-based framework for labor as an investment decision.

2.1 Relevant Literature

Keynesian Roots. In *The General Theory* (1936), Keynes introduced the MEC concept to explain investment decisions based on expected future profitability. He argued that firms invest when the anticipated internal rate of return exceeds the interest rate. At the same time, he located employment determination in the principle of effective demand, asserting that firms hire only as much labor as is required to meet expected sales. Yet he stopped short of formally applying MEC's intertemporal logic to labor itself.

Labor Hoarding and Adjustment Costs. Empirical work by Okun (1963) and Baily (1971) established that firms often retain workers even in downturns, absorbing short-run shocks rather than incurring rehiring and retraining costs. This tradition treats labor as quasi-fixed and highlights frictions in employment adjustment. However, it generally frames these frictions as inefficiencies rather than outcomes of a profit-based calculation.

Human Capital and Firm-Specific Labor. Becker's (1964) seminal work on human capital, and later developments such as Stevens (1994) on firm-specific skills, underscore that labor contributes to capital formation, both for the individual and the firm. Still, this literature tends to emphasize

worker-side accumulation or cost amortization, rarely modeling how firms evaluate the expected returns from labor in a monetized, demand-constrained context.

Search and Matching Models. The Mortensen-Pissarides (1994) framework brought forward the role of frictions and expectations in labor market flows. Firms create vacancies when the expected surplus from a match exceeds the cost. While powerful for explaining unemployment duration and transitions, these models typically rely on static surplus calculations and do not incorporate a dynamic internal rate of return structure. Nor do they fully account for uncertainty in future demand realization.

Labor and Intangible Capital. More recently, the literature on intangible capital—especially Corrado, Hulten, and Sichel (2009)—has underscored the productive value of organizational capabilities, knowledge, and firm-specific human inputs. These studies implicitly support the idea of labor as a capital-like input, particularly in knowledge-intensive sectors. However, this literature remains largely accounting-focused and does not develop a behavioral theory of hiring based on intertemporal profitability under demand uncertainty.

Expectations, Slack, and Demand Constraints. Macroeconomic studies have increasingly emphasized the role of effective demand in shaping employment outcomes. Blanchard and Leigh (2013), for example, show that demand underestimation can lead to lasting output and employment losses. De Loecker et al. (2020) link firm-level markups to the degree of labor cost pass-through, while post-Keynesian models (e.g., Lavoie 2014) highlight capacity utilization, path dependence, and the irreversibility of labor decisions.

2.2 Where MEL Advances the Literature

By drawing from these diverse traditions and uniting them in a single, intertemporal profitability framework, MEL makes several distinctive contributions:

- It incorporates **effective demand constraints**, through a realizability factor (Ω), directly into the firm's hiring calculus.
- It applies the **internal rate of return logic** of MEC to labor, treating employment as an investment.
- It provides a **structural foundation** for involuntary unemployment that does not rely on rigid wages, informational frictions, or mispricing, but on firms' rational responses to perceived demand conditions.

In this way, MEL reframes labor underutilization as an endogenous and expectation-sensitive phenomenon. Rather than viewing hiring frictions as anomalies, MEL interprets them as features of intertemporal decision-making in uncertain markets—bringing employment theory closer to the spirit of Keynes's original insights, while furnishing it with sharper formal tools.

3. Formal Definition and Derivation of MEL

Keynes defined MEC as the internal rate of return that equates the supply price of a capital good to the present value of expected future returns from it. More specifically, MEC is the expected rate of return on an additional unit of capital, calculated as the discount rate that equates the present value of expected future net *realizable* returns from an asset to its supply price (i.e., the cost of acquiring or producing that capital good). Keynes's insight was that investment is not driven by physical productivity alone but by investor expectations about future actual returns. n Keynes's

world, investment depends on how confident investors are that future returns will justify today's capital outlay.

Analogously, treating labor as a firm's productive asset, MEL is here defined as the expected real rate of return on an additional unit of labor, calculated as the discount rate that equates the present value of the expected *realizable* monetary value of the marginal product of labor to the full cost of employing the additional unit of labor. Formally:

$$(1) \qquad C_t^L = \sum_{i=1}^{\infty} \frac{MPL_t P_t^Y \Omega_{t+i}}{(1+r_t^L)^{t+i}}$$

where C^L is the nominal full marginal cost of labor, including wages, taxes, and any hiring costs; MPL is the marginal physical product of labor; P^Y is the price of ouitput;; and $\Omega \in [0,1]$ is the *expected realizability factor*, that is, the probability-wighted share of output that the firm expects to effectively sell in the market in the future.

Equation (1) emphasizes that firms evaluate labor in forward-looking, monetized terms, just as they evaluate capital. MEL differs from MPL, much as MEC differs from the marginal productivity of capital, in that both MEL and MEC reflects not just the technical productivity of labor and capital, respectively, but also the expected monetary return from their output, conditional on demand realizability. The introduction of Ω is crucial: it parallels Keynes's emphasis on expectations in MEC and internalizes demand-side constraints directly into the firm's hiring logic.

This approach also permits a direct analogy with the MEC condition for capital investment: firms will hire labor up to the point where MEL equals the internal hurdle rate for labor expenditure—analogous to the market rate of interest for capital. This hurdle rate reflects the firm's opportunity cost of labor.

Furthermore, while MEC typically assumes a capital good's returns unfold over multiple periods and may include depreciation, MEL must also accommodate a temporally distributed benefit stream, particularly where labor investments entail onboarding lags, ramp-up productivity, or fixed-term contracts. Though labor itself does not depreciate in the physical sense, obsolescence, fatigue, and exit risk may function as economic analogs.

Finally, MEL responds acutely to uncertainty in realizability factor Ω. Because labor returns are conditional on the ability to realize sales revenue, firms face a fundamental uncertainty regarding whether additional output will translate into profit. This sensitivity introduces a behavioral asymmetry into labor demand, akin to Keynes's notion of "animal spirits" in investment. MEL thus captures how firms reduce hiring even in the presence of technical productivity when expectations of realizability deteriorate.

In sum, MEL extends the Keynesian critique of full employment equilibria by embedding effective demand directly into the calculus of labor allocation. It provides a formally consistent framework for modeling labor demand in economies where demand expectations—not just cost minimization—drive firm behavior.

4. Keynes, MEL, and the Classical Postulates Revisited

The introduction of MEL allows to revisit Keynes's treatment of the classical postulates from a new angle—one that strengthens his critique of classical labor market theory and clarifies the role of expectations in the hiring decision.

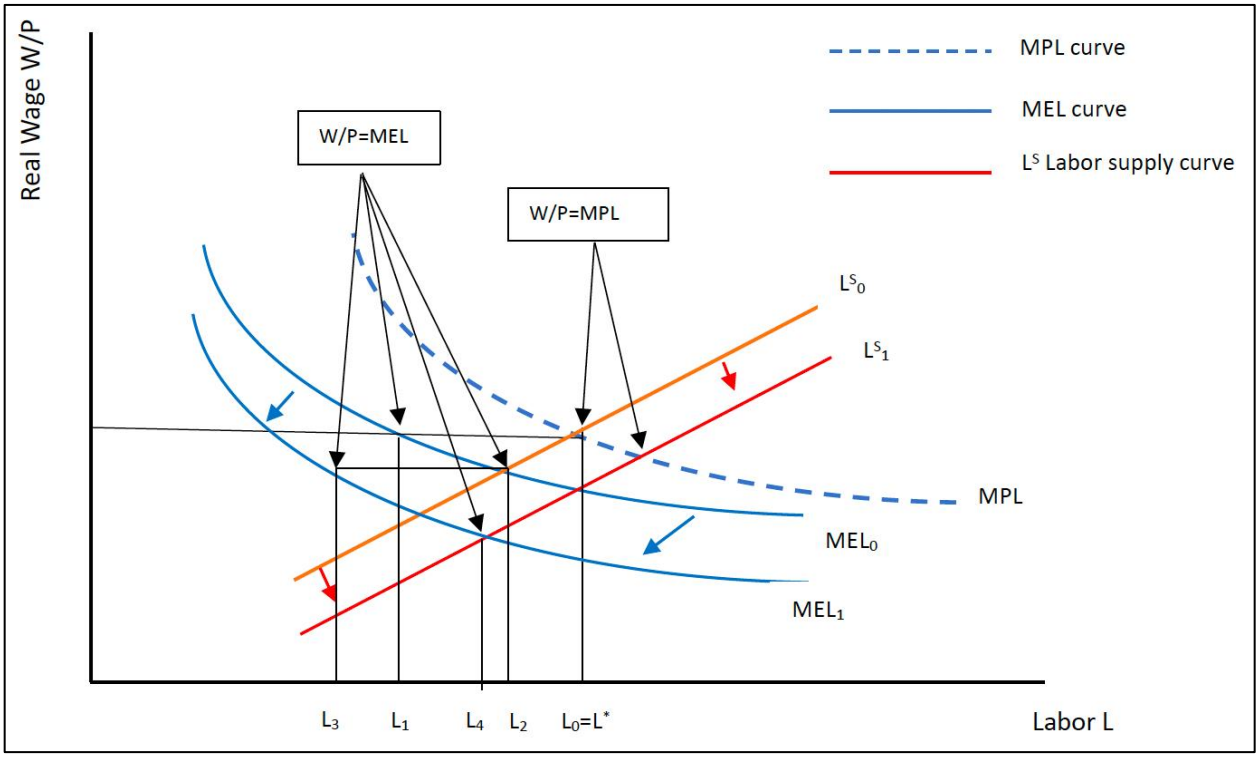
In *The General Theory*, Keynes famously accepted the first classical postulate—that the real wage equals the marginal productivity of labor—but rejected the second, which held that labor supply is determined by the real wage. He argued that unemployment could persist even when real wages

were high, due to insufficient effective demand. As a result, he effectively discarded the labor supply curve from his analytical framework.

However, the MEL framework suggests an alternative interpretation: Keynes could have rejected the first postulate instead—that is, he could have questioned the sufficiency of the real wage–MPL equality as a determinant of labor demand—while maintaining the second. This reversal leads to deeper theoretical consistency and sharper policy implications.

The key insight stems from recognizing that MEL differs from MPL whenever firms face uncertainty about the realizability of output. In such a case, with demand shortfalls, the return on labor falls below its cost even when productivity remains high. Hiring decisions are not made based on physical productivity alone, but on the profitability of expected, monetizable returns from labor. This logic is illustrated clearly in Figure 1.

Fig. 1 MEL vs. MPL Comparison



Note: At the points where real wage equals MPL, labor is at full employment L^* and L^{**}. Actual emplyment points L_2 and L_3 are where the real wage equas MEL.

The MEL curve lies below the MPL curve for $\forall \Omega_t < 1$, and the firms' hiring decision is governed by where the MEL—not the MPL—equals the real wage. With real wage flexibility, empolyment reaches L_2, where both the real wage and employment are lower than at full employment L^*, where $W/P = MPL$: all else equal, the economy settles at an underemployment equilibrium and stays there until new factors intervene. Consider now a negative demand shock that lowers firms' expectations of future sales. This reduces Ω from Ω_0 to Ω_1 and shifts the MEL curve downward. Employment contracts to L_2, but again real wage flexibility allows it recover sonehow, with the economy eventually settling at new underemployment equilibrium L_3.

The MEL configuration differs from conventional Keynesian unemployment, in that unemployment at both L_2 and L_3 is voluntary. Yet it is consistent with the notion of Keynesian unemployment equilibrium, in that equilibria at L_2 and L_3 are both socially suboptimal (with respect to what equilibrium could be at higher levels of effective demand), and yet stable, since the market by itself is unable to push the economy to a superior equilibrium. Notice that real wage adjustments of any magnitude, should they take place in the face of demand shocks, would do nothing to restore the economy's original MPL: in the best of circumstances, the economy could reach back to labor full employment but at very low levels of real wages and demand-induced output. As a result, also, capacity would be shrinking, capital would decumulate, and the economy's productivity and output gowth potential would decline.

The MEL confiruation is more general that the Keynesian unemployment one, since it captures: 1) the sharp reaction of firms to expected negative demand shocks (from L_1 to L_2), 2) the economy's

partial recovery due to labor response (from L_2 to L_3), and 3) its stabilization around a state of persistent stagnation—underemployment equilibirum.

In this last regard, the MEL configuaration shows that even in the presence of real wage flexibility, the economy may remain trapped in a state of unemployment. Unemployment results not from wage stickiness, and not even from excess supply in the labor market, but from the intertemporal profitability calculus that governs firms' hiring under uncertainty and workers' adjustment to a lower real-wage normal.

In the context of Keynes's critique of classical labor economics, the MEL framework enables rejection of the first postulate—namely, that the real wage equals the marginal product of labor—while retaining the second, which posits that labor supply responds to the real wage. Rejecting Postulate 1 enhances the realism of analyzing recessionary dynamics. If the MPL condition is upheld despite demand constraints, a negative demand shock—by reducing employment—would imply an increase in the MPL and thus support higher real wages for the employed. Yet, in practice, firms rarely raise wages in downturns. MEL explains this disconnect: under demand uncertainty, firms do not base hiring decisions solely on physical productivity but on the expected realizability of output. As such, the marginal efficiency of labor falls short of the MPL, reflecting constrained revenue expectations. Firms are thus unwilling or unable to raise real wages, even when technical productivity rises. This divergence highlights how MEL provides a more accurate and demand-sensitive lens through which to understand labor market behavior in recessionary environments.

5. A Tobin's "q" for Labor?

A natural extension of MEL is to express it as a ratio—much like the one Tobin developed for capital—thereby converting a continuous intertemporal return function into a concise, forward-

looking signal for hiring decisions. In Keynes's treatment of capital investment, MEC expressed the internal rate of return on an investment project, contingent on the expected realizability of future revenues. Later formalized by Tobin, this logic gave rise to quotient q: the ratio between the market valuation of existing capital and its replacement cost. When q exceeds one, firms are incentivized to invest in new capital because the expected return outweighs the cost; when q falls below one, capital accumulation stalls.

The MEL framework invites a direct parallel in the labor market. If firms hire based on an intertemporal profitability criterion—one conditioned by expectations about future demand—then their willingness to employ additional labor should also be expressible as a ratio between anticipated returns and current costs. This ratio, which we term **Tobin's q for labor** (denoted q_L), formalizes labor demand as a valuation problem, not simply a productivity or price-matching problem. Formally, using Eq. (1), the labor q can be defined as:

$$\mathrm{q}_L = \frac{\sum_{t=1}^{T} \Omega_t MPL_t P^Y}{(1+r)^t C^L}. \tag{2}$$

This formulation yields an intuitive decision rule:

- When $\mathrm{q}_L > 1$, the present value of expected revenue attributable to labor exceeds the cost of hiring → firms are incentivized to expand employment.
- When $\mathrm{q}_L > 1$, the expected value is insufficient to justify the cost → firms restrain or reduce hiring.
- When $\mathrm{q}_L = 1$, labor is priced at its expected return → employment remains stable.

While the application of Tobin's q to labor remains relatively rare compared to its use in capital theory, other notable works have extended the q framework to labor dynamics. These include Basu

(2006), who formulates a Tobin's q of a worker in a frictional labor market model, and Kaplan et al. (2007), who explore the co-movement of capital and labor in the long run using q-based reasoning. Related strands of the literature—especially in search and matching models and theories of firm-level hiring dynamics—often deploy valuation ratios that implicitly resemble labor q, even if not labeled as such. The labor q developed here, grounded in MEL, differs from these in both structure and theoretical foundations, emphasizing demand realizability, profitability, and expectations rather than match quality or surplus sharing. A brief comparison will follow in Section 5.1.

Expressing MEL as q_L serves several important purposes. First, it aligns labor theory with the financial logic of capital valuation. Just as Tobin's q summarizes the investment calculus in a single metric, labor q encapsulates the hiring calculus in demand-constrained conditions. Second, it clarifies how expectations about future demand—encoded in the realizability factor Ω—affect hiring, not through indirect channels like output or interest rates, but directly through firms' own valuation of labor.

Each term in Eq. (2) has clear behavioral and policy implications. An improvement in Ω—say, due to rising consumer sentiment, a fiscal stimulus, or a forward-guided policy framework—increases the numerator and raises q_L, making hiring more attractive. Similarly, wage subsidies, tax credits, or reductions in employer-side social contributions lower the denominator C^L, thereby raising q_L. Even changes in expected output prices or productivity matter—provided they are believed to be realizable.

On the other hand, increases in the discount rate r reduce the present value of future revenues, causing q_L to fall, and discouraging hiring. This channel captures the contractionary effects of

monetary tightening more clearly than conventional labor demand curves. In fact, MEL via q_L provides a behavioral micro-foundation for understanding how interest rate hikes influence employment—not through changes in the real wage, but through firms' valuation of labor's future contribution to revenue under uncertain realizability.

The introduction of q_L also makes MEL more accessible to empirical and simulation-based work. In firm-level panel studies, proxies for labor q can be constructed using survey-based expectations (e.g., business tendency surveys), output prices, estimated labor productivity, and detailed payroll data. This enables researchers to assess how changes in profitability conditions, rather than real wages alone, influence hiring behavior.

In macroeconomic modeling, q_L allows the MEL hiring rule to be implemented in a way that mirrors investment behavior. Rather than treating employment as a static or friction-laden adjustment process, hiring becomes a forward-looking choice driven by valuation, governed by how firms perceive the profitability of labor under prevailing demand conditions.

There is, however, a critical asymmetry between capital q and labor q. While Tobin's q for capital often draws on observable financial market data (e.g., stock prices), Tobin's numerator for labor must be constructed from internal expectations and beliefs. The market does not assign a price to labor's expected future output in the same way it prices shares of capital. The absence of a market valuation for labor amplifies the role of narratives, norms, and policy signals. Employment protection laws, collective bargaining, public employment guarantees, and broader political-economic contexts all shape the realizability factor and the cost structure—hence directly affecting q_L. In this way, labor q becomes a multi-dimensional signal, reflecting both micro-level firm profitability and macro-level confidence and institutional structure.

The introduction of a labor q completes the symmetry between MEL and MEC. Firms invest in labor just as they invest in capital—not based solely on current productivity, but on the anticipated monetizable return on that investment under uncertain future conditions. In both cases, the effective decision rule is whether the expected net present value exceeds cost. And in both cases, belief-contingent valuation mediates the translation from technical productivity into realized employment or investment.

By casting labor demand in this light, MEL and q_L jointly restore the role of **effective demand and expectations** to the heart of employment theory. Labor, like capital, is a vehicle for value creation only when its output is expected to be absorbed by markets. In economies where firms doubt future sales or face uncertain macroeconomic conditions, q_L may fall persistently below one—leading to hiring freezes, underemployment, and secular stagnation, even when real wages and productivity appear favorable.

5.1 Comparison with Other q-Based Approaches to Labor

The formulation of q_L proposed in this article distinguishes itself from the attempts to extend Tobin's q logic to labor recalled above. Basu, cit., has introduced the idea of a "Tobin's q of a worker" within a search-and-matching framework. In Basu's model, $q = \frac{V'(L)}{w}$, where $V'(L)$ is the marginal value of a match to the firm and *w* is wage. Basu's q thus evaluates the marginal surplus of a match and uses it to determine whether firms should hire, retain, or destroy jobs. It emphasizes frictional constraints**,** match quality, and separation risk as key drivers of labor demand.

By contrast, q_L in the MEL framework is not match-specific, nor is it primarily focused on frictions. As noted, it reflects a firm's intertemporal valuation of labor as an asset, driven by expectations

about demand realizability and profitability. In other words, Basu's q is embedded in a micro-founded job-creation logic, whereas q_L is anchored in macro-level hiring behavior under Keynesian uncertainty. Other differences distinguish the two approaches.[2]

Finally, what distinguishes q_L from the other labor q-like measures in the literature cited earlier is that it values labor as a firm-level asset, whereas these other approaches value labor in terms of vacancy posting decisions or match surplus allocation, typically under the constraints of search efficiency and matching frictions.

6. Comparative Statics

Leet us express the firm's labor demand as:

$$L_t = \mathcal{L}(r_t^L, \Omega_{t+1}, MPL_{t+i}, P_{t+i}^Y, C_t^L), \quad i = 1, \dots, \infty \tag{3}$$

where $\mathcal{L}$ is decreasing in C_t^L and r_t^L, and increasing in the expected values of Ω, MPL_{t+i}, and P_{t+i}^Y.

The comparative statics of MEL can be examined by partially differentiating Eq. (2) with respect to its key variables. Each of the following comparative statics interprets how a shift in expectations or fundamentals alters the hiring decision, not through relative prices alone, but through the profitability calculus that governs labor investment.

Realizability (Ω)

An increase in the expected realizability ratio raises the effective revenue per unit of labor. This translates into an upward shift in the stream of expected returns, which in turn raises the internal

[2] Specifically: Basu's q uses the wage as the sole cost metric, whereas q_LL incorporates the full marginal cost of labor. Also, Basu's surplus $V'(L)$ is implicitly a technical productivity term minus frictions, whereas q_L explicitly embeds demand-side realizability, a central Keynesian constraint. Finally, Basu's model is well-suited to analyzing job flows and match heterogeneity, where q_L captures belief-contingent underemployment and sluggish recovery under weak expectations.

rate of return consistent with the given cost. Graphically, the MEL schedule shifts upward, and labor becomes more attractive as an asset. Provided MEL exceeds the hurdle rate for hiring, employment expands. This mechanism provides a precise channel through which improved demand expectations (e.g., via fiscal expansion or improved consumer confidence) stimulate hiring.

Labor cost (C^L)

When the cost of labor rises—through higher wages, benefits, taxes, or regulatory compliance—MEL must increase to maintain profitability. If the return stream does not rise proportionately, the inequality MEL implies contraction in employment. Conversely, wage subsidies or reductions in payroll taxes reduce , thus raising MEL even if remains unchanged. This shows how policies affecting labor cost directly shift hiring incentives in the MEL framework.

Productivity (MPL)

Technological progress or skill improvements that raise the marginal product of labor boost the value of future revenue streams. However, the ultimate impact on MEL and hiring depends critically on Ω. If firms expect to be demand-constrained, higher productivity does not fully translate into higher effective returns. This qualifies the classical view that productivity gains automatically translate into greater labor demand, highlighting the mediating role of realizability.

Prices (P^Y)

Inflation or improved output pricing enhances the nominal value of the revenue stream from labor, ceteris paribus. As with productivity, the gain is fully monetized only if is high. Thus, MEL predicts greater hiring in inflationary contexts only when demand realizability is strong, capturing why cost-push inflation alone does not lead to job creation absent credible demand expansion.

Interest rates (r^L)

Higher interest rates reduce the present value of future labor-derived revenues, shrinking MEL for any given return stream. This result confirms the contractionary impact of monetary tightening on labor demand via the intertemporal return channel. Conversely, accommodative monetary policy increases MEL by lowering the discount rate applied to future revenues, reinforcing the stimulative effects of demand-side expansion.

Taken together, these comparative statics underscore how MEL endogenizes employment responses to both supply-side and demand-side forces in a dynamic, expectation-sensitive manner. It thus provides a more comprehensive framework than conventional real-wage analysis for understanding labor market adjustment in open and uncertain macroeconomic environments and opens the door to concrete policy applications, as discussed next.

7. Policy Implications

The MEL framework reshapes the foundations of employment policy. Unlike models rooted in real wage rigidity or labor market frictions, MEL identifies the root cause of involuntary unemployment as an intertemporal profitability shortfall driven by weak effective demand. This yields a fundamentally different logic for policy intervention:

Stimulating Expectations. Policy should aim to raise and stabilize **Ω**. This includes:

- **Demand management**: Counter-cyclical fiscal policy that boosts aggregate demand increases the share of output firms expect to sell.
- **Credibility-enhancing policy**: Stable, forward-guiding monetary and fiscal frameworks help anchor positive expectations.

- **Public investment signaling**: Government-led projects increase future demand anticipation, thus raising MEL indirectly.

Reducing the Cost of Labor. Because MEL is defined relative to the cost of labor, reducing C^L raises the internal rate of return on labor. Policies include:

- Wage subsidies or hiring tax credits.
- Reductions in payroll or social security taxes.
- Public provision of benefits (e.g., healthcare, childcare) to lower employer-side costs.

Complementing Productivity with Demand Support. Supply-side reforms that raise marginal productivity (e.g., education, technology) do not increase hiring unless firms expect the resulting output to be sold. Productivity must be paired with policies that support realizability:

- Sectoral demand stimulation.
- Strategic industrial policy aligned with consumer capacity.

Rethinking Inflation and Monetary Tightening. In MEL terms, inflation raises the nominal return to labor only if Ω is high. Conversely, interest rate hikes reduce the present value of labor's revenue stream, lowering MEL. Therefore:

- Monetary tightening has a direct contractionary effect on labor demand via MEL.
- MEL suggests caution in using interest rates to combat cost-push inflation when employment remains below potential.

Automatic Stabilizers and Employment Programs. Because MEL depends on realizable demand, direct government employment schemes can serve as demand guarantees, sustaining labor value when the private sector retrenches. Policies include:

- Public employment guarantees.
- Expansion of automatic fiscal stabilizers (e.g., unemployment benefits tied to hiring incentives).

In sum, MEL restores demand-side reasoning to labor policy. Rather than pushing wages down to "clear" the labor market, MEL calls for policies that raise the expected return to labor by enhancing realizability, reducing costs, and securing intertemporal demand. This re-centers Keynesian logic in labor policy design for open and uncertain macroeconomic environments.

8. Research Agenda

Looking to the future research agenda for the MEL theory, it will be necessary to sujbect the theory to empirical testing. To do so would require rethinking how we observe and the firms' hiring behavior is observed and explained in demand-constrained economies. Traditional labor demand models focus on MPL and real wages. In contrast, MEL suggests that hiring is driven by a profitability logic rooted in expectations about the realizable value of output. This shift opens up several promising paths for empirical work. The key challenge is measurement. Because MEL depends on firms' expectations about future labor-derived returns, it cannot be inferred from current productivity alone. To study MEL empirically, one would need to use proxies for three main components: expected returns from labor, the cost of labor, and the internal rate of return that balances the two. One approach is to use firm surveys and business tendency indicators to estimate firms' expectations about future sales—the core of the realizability factor Ω. These expectations can then be combined with estimates of marginal labor productivity and output prices to construct an expected revenue stream from labor. On the cost side, detailed data on wages, benefits, and employment taxes—available from firm-level or national datasets—can approximate the full cost

of employment. With these elements in hand, we can build a proxy for MEL as the ratio of expected labor-derived returns to labor cost, adjusted for timing. Even if the full intertemporal structure is not observable, changes in this ratio can serve as a leading indicator of firms' hiring behavior.

The development of a Tobin-style q for labor, q_L, further enhances this empirical agenda. Because q_L expresses MEL as a ratio between expected returns and labor cost, it can be operationalized using available firm-level data—much like Tobin's q is constructed in investment studies. Researchers can use business tendency surveys to estimate realizability expectations, combine these with productivity and pricing data, and compare them against observed labor costs to construct proxies for q_L. These proxies can then be used to forecast hiring behavior and test whether variations in labor q are more predictive of employment changes than traditional wage-productivity gaps.

Empirically, this framework leads to several testable propositions. First, hiring should respond positively to increases in expected realizability Ω—for instance, after a fiscal stimulus or improvement in consumer sentiment. Second, labor demand should be more sensitive to profitability conditions than to wage levels alone, especially in slack economies. Third, MEL provides a testable mechanism for hysteresis: if weak demand expectations persist, MEL may remain below the hiring threshold even after costs or productivity improve.

A natural setting for testing these ideas is firm-level panel data, where hiring decisions can be regressed on MEL proxies and control variables such as interest rates, taxes, and policy announcements. Structural macro models—DSGE or stock-flow consistent frameworks—can also incorporate MEL-based hiring rules to simulate labor market dynamics under different demand scenarios. Forecasting accuracy can be assessed by comparing MEL-based hiring predictions to those from traditional MPL-based models.

Finally, the MEL framework suggests a broader research agenda. It invites reconsideration of labor market segmentation, where different groups of workers may face systematically different realizability prospects. It raises questions about international asymmetries in labor underutilization and the role of policy credibility in shaping firm expectations. And it opens the door to revisiting classic debates about wage flexibility, public employment, and the limits of monetary policy—all from a profitability-centered perspective.

9. Conclusion

This article has introduced the **Marginal Efficiency of Labor (MEL)** as a Keynesian alternative to classical labor demand theory, grounded in profitability expectations rather than static productivity conditions. MEL reframes labor hiring as an intertemporal investment decision driven by firms' beliefs about the realizable value of labor's output, thereby internalizing effective demand directly into the hiring calculus.

Building on this foundation, the article has developed a Tobin's q for labor—a valuation ratio that expresses the relationship between the present value of expected returns from labor and its full marginal cost. This construct offers both a theoretical analog to Tobin's capital q and a practical tool for embedding MEL in empirical research and macroeconomic modeling. The labor q serves as a forward-looking index of hiring profitability, sensitive to expectations, sentiment, and institutional structure.

With MEL and labor q, we can interpret underemployment, hiring inertia, and hysteresis not as failures of wage flexibility or labor market frictions, but as rational responses to belief-contingent profitability conditions. This offers a new policy paradigm: one that emphasizes expectation

management, demand realization, and the reduction of labor's hurdle rate through targeted fiscal, monetary, and structural interventions.

Ultimately, the MEL framework—including with its extension into the labor q—complements the Keynesian revolution in employment theory. It provides the missing behavioral and intertemporal microfoundation for labor demand in modern macroeconomics, equipping both theorists and policymakers with sharper tools to understand and address persistent labor underutilization in demand-constrained economies.

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