

出國報告(出國類別：專題研究)

美國編製採購經理人指數之研究

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摘 要

採購經理人指數 (PMI) 是由美國供應管理協會 (ISM) 進行產業調查後，所公布一項極具市場影響力的經濟指標，向來受到經濟學者、財經企業及政府部門重視，做為美國及全球經濟的重要參考。

本研究深入探討 ISM 調查方法及 PMI 的編製與應用，結果發現該調查係結合第一手採購經理人專業意見，具相當可信度，調查結果可善加利用，例如生產亦可用來預測工業生產、價格指數可預測未來通貨膨脹等。調查報告中最受矚目的 PMI 具有發布時間早、不須修正、偵測經濟變化及反映單一事件對經濟衝擊等特點，可即時反映景氣現況，是金融市場及景氣的重要指標。此外，由於 PMI 與實質 GDP 呈現高度相關，且領先景氣循環轉折點數月，可做為預測短期景氣概況的工具，提前偵測景氣變化。

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壹、研究目的與過程

美國供應管理協會（ISM）屬質產業調查行之有年，調查結果往往能反映經濟活動的變化，向來受到經濟學者、財經企業及政府部門重視，做為美國及全球經濟的重要參考。調查結果中最受矚目的是每月發布之採購經理人指數（PMI），由於與實質 GDP 呈現高度相關，且具有即時發布及領先景氣循環轉折點等特性，被視為一種重要的總體經濟領先指標。不僅指數本身受到重視，構成項目也頗受重用，例如生產可用來預測工業生產，就業指數常被用來預測失業率及非農就業人數等。

有鑑於此，本次出國進行研究之主要目的，即在深入了解 ISM 進行產業調查之方法(例如抽樣方法、調查問項、結果編製及發布等)，做為我國推行產業景氣調查的借鏡。並探討 PMI 指數本身特性及在總體經濟方面的應用，例如與景氣循環之關聯性、如何影響金融市場及用以預期短期景氣之方法，希望進一步了解如何將產業調查結果發揮最大效益，以期能夠正確且即時捕捉景氣概況。

本研究計畫進行過程如下：於 2005 年 8 月 29 日赴美，參加美國舊金山州立大學 5 個月的交換學者計畫，修習總體課程，並運用學校資源，蒐集 PMI 指數相關學術資料，進行研究並撰寫專題報告。期間並參訪以研究景氣著名的國際景氣暨經濟研究基金會 FIBER(Foundation for International Business and Economic Research)及編製波士頓採購經理人指數的波士頓採購經理協會 PMAB(Purchasing Management Association of Boston)。

貳、ISM 編製「採購經理人指數」之方法與應用

採購經理人指數 (PMI¹) 是由美國供應管理協會 (Institute of Supply Management, ISM) 所公布一項極具市場影響力的經濟指標。因為與實質 GDP 呈現高度相關，且領先景氣循環轉折點，被視為一種重要的總體經濟領先指標。由於每月公布時間相當具即時性，因此每當發布時，均引起各界重視，金融市場也會有所調整。此外，不僅指數本身受到重視，構成項目也頗受重用，例如生產可用來預測工業生產，就業指數常被用來預測失業率及非農就業人數等。有鑑於此，本文主要討論美國編製 PMI 的方法，並探究 PMI 於總體經濟方面的應用，希冀對該項重要經濟指標有進一步的了解。

本章主要內容如下：第一節簡介 ISM 機構，並說明 ISM 進行每月營運調查之方法，以期了解 ISM 如何蒐集及發布資料；第二節探討 PMI 指數、構成項目及編製方法，並深入研究 PMI 特性及應用；第三節討論 PMI 與總體經濟的關聯性，及如何應用 PMI 預測短期景氣。

一、美國供應管理協會 (ISM) 報告簡介

由於 PMI 是 ISM 每月所進行的「ISM 製造業調查 (ISM Manufacturing Business Survey)」調查結果編製而成，因此研究 PMI 之前，我們先簡介美國供應管理協會及其定期發布的營運報告，以了解 PMI 編製的背景。

ISM 成立於 1915 年，為全世界最大的供應管理協會，本身為非營利機構，成立目的係為提供並提昇供應管理領域的專業知識。ISM 前身為「全

¹ PMI 原為 Purchasing Manager's Index 的縮寫。但由於 ISM 名稱更改並擴大組織定位，2001 年 9 月 1 日後 ISM 僅使用該首字縮寫 PMI，不再使用 Purchasing Manager's Index。

國採購經理人協會(National Association of Purchasing Management, NAPM)」，2002年1月2日爲了將機構重新定位，由「採購管理(Purchasing Management)」擴大爲涵蓋層面更廣的「供應管理(Supply Management)²」範疇，而將組織更名爲「供應管理協會」。ISM分會目前遍布美國境內各州及海外(加拿大、法國、香港、墨西哥、南韓等)，尙有3個不分地區的產業別機構³，總會員超過四萬名供應管理專業人員。

1920年代初期，ISM開始蒐集製造業的營運狀況(Business Condition)資訊。1931年發行營運調查結果，即目前的「ISM製造業營運報告(Manufacturing ISM Report On Business)」⁴。期間曾因第二次世界大戰中斷四年。1950年代晚期開始，這份營運報告漸漸受到重視，經濟學家亦發現其資料可用以研究景氣趨勢⁴。時至今日，ISM會員、經濟學家、財經企業及政府部門均使用該報告結果，作爲美國及全球經濟的領先指標。

1990年代後期，有鑑於美國服務業日益成長，ISM1997年7月開始舉辦「ISM非製造業調查(ISM Non-Manufacturing Business Survey)」，並於1998年6月開始發布「ISM非製造業營運報告(Non-Manufacturing ISM Report On Business)」，以反映占GDP比重高達80%的美國服務業景氣變化。以下分別簡要說明ISM進行這兩種營運調查的方法。

² ISM將供應管理定義爲「鑒別、獲得、使用、定位及管理組織所需或有潛在需求、有助於成就策略目標的資源。」，其範圍包含了判斷市場機會、創造競爭策略、發掘潛在供應者及方法等，而非侷限於傳統被動式的採購。由於策略性供應管理必須廣泛蒐集市場資訊及發展降低成本策略，其活動會直接影響組織獲利和營運。

³分別是電力公共產業、旅遊業、政府部門。

⁴ Klein and Moore(1988)

(一) ISM 製造業營運調查

ISM 製造業營運調查的基本概念很簡單：每個月由超過 400 位匿名 ISM 製造業會員⁵組成「ISM 製造業營運調查委員會 (ISM Manufacturing Business Survey Committee)」，委員會之會員將被要求填答一份問卷(附表一)。問卷中有數個屬質問題，會員們依照其組織當月表現(與上月相比)，回答問題中的經濟活動「轉好(better)」、「轉壞(worse)」或「不變(same)」。每個問題的調查結果將編製為擴散指數(Diffusion Index, DI)，可以評估經濟活動轉變的方向和程度大小。DI 的計算公式如下：

$$DI=1\times(\text{好轉所占之百分比})+1/2\times(\text{不變之百分比})$$

例如回答轉好之百分比有 20%，不變之百分比有 70%，轉壞之百分比有 10%，則 DI 為 55。理論上，DI 的範圍由 0(所有填答者均認為轉壞)到 100(所有填答者均認為轉好)⁶，當 DI 高於 50 時，表示看好的比例較高，相對地，當 DI 低於 50 時，表示看壞的比例較高。當 DI 等於 50 時，表示與上月無異。「轉好」、「轉壞」或「不變」三項百分比並不容易與其他月份做比較，但轉為 DI 後，便可以清楚觀察每月變動。

編製成 DI 後，ISM 會使用美國商務部(U.S. Department of Commerce) 提供的季節調整因子對 DI 進行季節調整⁷。主要係排除每年各月資料因氣候、制度、及非移動假日(non-movable holidays)等非經濟因素造成的季節性變動，提升資料可信度。

⁵ 會員及其組織名稱均受到保密。

⁶ 實務上，擴散指數不會為 0 或 100，因為在景氣循環的任何階段(擴張或衰退)都會有部份廠商在經營上好轉，也會有部份廠商在經營上轉壞。

⁷ 並非每個問項均需季節調整，目前進行季節調整的項目有生產、新接訂單、存貨、僱用人數、供應商交貨、新接外銷訂單及 PMI。

調查範圍涵蓋全美 50 個州的 20 個產業，產業依照二碼標準產業分類系統(Standard Industrial Classification, SIC)分類(詳見表一)。爲了增加樣本的可靠度，ISM 依產業占製造業 GDP 的比重分配樣本比例，例如，運輸及其設備製造業占 GDP 比重較紡織業高，所以受查會員也較多。另外，各產業樣本並非隨機抽取，而是依照公司大小及地理位置選取。

表一 ISM 製造業營運調查產業範圍

1. 食品製造業	11. 橡膠及塑膠製品製造業
2. 菸草製造業	12. 皮革製造業
3. 紡織業	13. 玻璃、石材及砂石製造業
4. 成衣製造業	14. 基本金屬製造業
5. 木材及其製品製造業	15. 金屬製品製造業
6. 家具製造業	16. 工商業設備及電腦製造業
7. 紙製造業	17. 電子零組件及設備製造業
8. 印刷及出版業	18. 運輸及其設備製造業
9. 化學製造業	19. 儀器及光學器材製造業
10. 石油製品製造業	20. 雜項製造業

資料來源：ISM 網站

註：雜項製造業包含珠寶、玩具、運動器材、樂器等。

ISM 製造業營運調查自 1948 年(第二次世界大戰後)到 1971 年 5 月這段期間僅調查 5 個問項，分別是生產、新接訂單、存貨、僱用人數、及商品價格。之後陸續加入新問項依序爲：供應商交貨(1971 年 6 月起)、新接外銷訂單(1988 年 1 月起)、進口(1989 年 10 月起)、未出貨訂單(1993 年 1 月起)及消費者存貨(1996 年 1 月起)。各問項及內容說明詳見表二。

表二 製造業營運調查問項及說明

問項名稱	內容說明
生產(Production)	生產水準的的變化幅度與方向
新接訂單(New Orders)	來自顧客的訂單水準
存貨(Inventories)	存貨水準的增減
僱用人數(Employment)	僱用人數的增減
商品價格(Commodity Prices)	企業購買商品或服務的價格升降
供應商交貨(Supplier Deliveries)	供應商交貨速度的快慢
新接外銷訂單(New Export Orders)	來自美國境外的訂單水準
進口(Imports)	原物料進口的變動率
未出貨訂單(Backlog of Orders)	已收到但尚未出貨的客戶訂單增減
客戶存貨(Customer Inventories)	顧客的存貨水準

資料來源：ISM 網站

註：1. 比較基準均為上月。

2. 供應商交貨早期名稱為 Vendor Performance。當該指標上升時，表示景氣好轉，交貨時間變長。
3. 未出貨訂單升高，通常代表業績轉好。

問項的調查結果除個別編製為 DI 發布，並將生產、新接訂單、僱用人數、供應商交貨及存貨五個指數經過季節調整後給予權重，合成綜合指數 PMI，用以反映製造業及總體景氣狀況。

ISM 製造業營運報告的發布時間為每月的第一個營業日。ISM 會於當日早上 10 點(東岸時間)召開記者會，會後有數個現場或錄音的訪談，並有平面媒體的深度採訪，例如今日美國報(USA Today)、華爾街日報(The Wall Street Journal)、及投資者財經日報(Investors' Business Daily)等。這些資訊將隨著網際網路的普及，同步發布在紐約、香港、東京、倫敦、雪梨等全球商業網站，成為經濟學家、財經企業及政府部門對美國及全球經濟的重要參考。

製造業營運報告的內容包含以下幾個主要部份(詳見附件三)：

1. PMI 指數及構成項目變動方向。
2. 成長產業(TOP PERFORMING INDUSTRIES)：依序列出本月呈現成長的產業。
3. 填答者看法(WHAT RESPONDENTS ARE SAYING ...)：ISM 問卷會要求填答者寫下國內外任何會影響其購買決策、公司或產業未來展望的因素，並將有代表性的意見登載於報告中。
4. 調查結果一覽表(MANUFACTURING AT A GLANCE)：包含各個問項本月 DI、上月 DI、變動率、變動方向和幅度、以及連續上升或下降的月份數，並提供製造業及總體經濟的變動方向、變動幅度及連續上升或下降月份數。
5. 價格波動及供給短缺商品(COMMODITIES REPORTED UP/DOWN IN PRICE, and IN SHORT SUPPLY)：將價格上升商品、價格下跌商品及供給短缺的商品一一列出。
6. 細項說明(MANUFACTURING INDEX SUMMARIES)：針對每個指標說明指數變動及個別產業表現。
7. 資料及調查方法(Data and Method of Presentation)：詳細說明該報告所採用的調查範圍及調查方法等。

除了每月定期發布的營運報告，ISM 約每半年(每年 5 月和 12 月)蒐集會員對總體經濟的看法，並對外發布六個月經濟情勢預測。此外，全美各地的分會，亦會有地區性的調查(例如區域、各州或城市，各地區調查及負責人請參考附件五)，調查方式均與 ISM 營運調查相同，但發布方式依各機構略有不同(發布樣式參考附件六)。

(二) ISM 非製造業營運調查

ISM 非製造業營運調查與製造業營運調查方法相同，係由全美境內超過 375 名匿名 ISM 非製造業會員填答問卷(附表二)，每月詢問會員有關營業活動、新接訂單、僱用人數、供應商交貨、存貨、價格、未完成訂單、新接外

銷訂單、進口、存貨評估等經濟活動，並且將結果編製為 DI。調查範圍涵蓋製造業以外的 9 個產業(詳如表三)，問項與製造業略有不同，未調查「生產」及「客戶存貨」，但多了「營運活動」及「存貨評估」二個問項。由於非製造業營運調查資料係由 1998 年開始發布，時間長度不足，無法編製類似 PMI 綜合指數，目前使用「營運活動指數(Business Activity Index)」⁸做為反映非製造業整體景氣的指數。問項及內容說明如表四。

表三 ISM 非製造業營運調查產業範圍

1. 農、林、漁業
2. 礦業
3. 營造業
4. 運輸、通訊、電、燃氣及環境衛生服務業
5. 批發業
6. 零售業
7. 金融、保險及不動產業
8. 服務業
9. 公共行政業

資料來源：ISM 網站

表四 ISM 非製造業營運調查問項

問項名稱	內容說明
營運活動(Business Activity)	營運活動的變化幅度與方向
新接訂單(New Orders)	來自顧客的訂單水準
僱用人數(Employment)	僱用人數的增減
供應商交貨(Supplier Deliveries)	供應商交貨速度的快慢
存貨(Inventories)	存貨水準的增減
價格(Prices)	企業購買商品或服務的價格升降
未出貨訂單(Backlog of Orders)	已收到但尚未出貨的客戶訂單增減
新接外銷訂單(New Export Orders)	來自美國境外的訂單水準
進口(Imports)	原物料進口的變動率
存貨評估(Inventory Sentiment)	主觀認為目前存貨水準太高或太低

資料來源：ISM 網站

註：1. 比較基準均為上月。

2. 一般調查往往使用賣價，但 ISM 所調查的是買價。

⁸ 即由問項「營運活動」所編製而成的 DI。

非製造業營運報告內容與製造業調查報告大致相同，惟在調查結果總表中，會與製造業調查結果進行比較。發布時間為每月第三個營業日，發布方式與製造業調查報告相同。

(三)如何使用營運報告

ISM 營運報告主要目的是提供資訊給供應管理者使用，至於該如何善用這些資訊，Ore(2002)提出下列幾點建議：

- 1.了解每個指標的特性：在應用指標前，要了解每個指標和景氣之間的關聯性。Ore 指出 PMI、新接訂單、供應商交貨是領先指標，通常領先一個月以上，可以用來預測未來的成長或衰退；生產指數是同時指標，歷史資料和聯邦準備理事會(Federal Reserve Board)發布的工業生產指數高度相關，是用來預測生產的良好指標；存貨、就業及價格指數則被視為落後指標，其變化受到新接訂單及生產的影響。
- 2.判讀 DI 指數：了解 DI 指數傳達的訊息有助於資料分析，以表五舉例說明。

表五 DI 指數判讀方法

指數變動	方向	變動率	說明
由 53%到 56%	上升，成長	成長率較快	較上月表現佳 快速成長
由 53%到 56%	下降，成長	成長率較慢	較上月表現佳 緩慢成長
由 53%到 47%	下降，收縮	由成長轉為收縮	較上月表現差 不再成長
由 47%到 43%	下降，收縮	收縮速度加快	較上月表現差 不再成長

資料來源：Ore(2002)

- 3.注意價格指數：價格指數被視為未來通貨膨脹的指標，其趨勢可用來預測未來通貨膨脹或緊縮。

4. 價格波動商品清單：每月 ISM 製造業營運報告發布時，會有一份價格波動商品的清單，顯示哪些商品價格上升或下降。仔細觀察這張表，將會發現價格變化的趨勢，提早得知價格改變的訊息。
5. 查看供給短缺清單：ISM 會員會填報供給短缺的商品，這份清單往往有助於發現潛在的供給瓶頸(Supply Bottlenecks)。
6. 預測個別產業：研究指出 PMI 與經濟成長率有相關性，可以使用 PMI 與 GDP 成長率相關係數預測 20 個產業的擴張或衰退⁹。
7. 注意趨勢，而非單月份表現：由於 ISM 資料經常呈現鋸齒狀波動，所以當單月份資料改變方向，未必是代表趨勢改變。觀察資料時，最好能計算移動平均，以平滑化市場波動。
8. 勿被資料或用語蒙蔽：在閱讀經濟報告，特別是比較 ISM 製造業營運報告和政府公布數據時，要特別留意資料的期間和報告用語。因為 ISM 營運報告主要是測量變化率，而非水準值，在用語上有時易生混淆，必須特別留意。
9. 掌握全球重大事件：景氣循環會影響資源配置，當供應管理者對景氣波動愈敏感，愈能有效控管成本。然而景氣循環長度和強度各有不同，Ore 指出近來美國景氣循環的時間較長，且深受全球重大事件影響，例如 1991 年墨西哥金融危機、1997 年亞洲金融風暴及 2001 年 911 事件等，因此供應管理者在解讀營運報告時，必須參考全球所發生的重大事件。

三、採購經理人指數(PMI)及編製方法

1980 年代早期，美國商務部的經濟學家 Theodore Torda 與 ISM 共同研究發展出 PMI，即將製造業營運調查中生產、新接訂單、就

⁹ 預測方式請參考 Kauffman(1994)。

業、供應商交貨情形及存貨五個指數，經過季節調整並加權後，合成一條綜合指數，以反映製造業及總體景氣狀況。由於 PMI 與整體經濟具有高度相關性，使得 PMI 成為 ISM 製造業營運報告中最受矚目的指數，華爾街甚至嘗試預測 PMI，以提早一步得知美國景氣概況。

(一)PMI 編製方法

1980 年 Torda 初步提出 PMI 想法時，他給予每個構成項目相同權數，當時 PMI 的編製方法如下：

$$PMI=(O+P+E+D+I)/5$$

其中 O 代表新接訂單、P 代表生產、E 代表僱用人數、D 代表供應商交貨、I 代表存貨，各個構成項目均為 DI。1982 年美國商務部與 ISM 將權數調整後始正式發布 PMI (Bretz, 1990)。1985 年 Torda 重新研究各構成項目權數，找出可以使 PMI 和 GDP 最為相關的權數，ISM 之後採用該權數，並回溯至 1982 年，該權數沿用至今。Torda 的 PMI 編製公式如下：

$$PMI=0.3\times O+0.25\times P+0.2\times E+0.15\times D+0.1\times I$$

ISM 將每個構成項目進行季節調整，以去除季節性因素。經過季節調整的 PMI 公式如下：

$$PMI=0.3\times(O/SAF_O)+0.25\times(P/SAF_P)+0.2\times(E/SAF_E) \\ +0.15\times(D/SAF_D)+0.1\times(I/SAF_I)$$

其中 SAF 為季節調整因子。

(二)PMI 應用

PMI 是由 DI 加權而成，本身亦是 DI，如前所述，DI 可以反映主要改變的方向及改變程度的大小。當 PMI 超過 50 時，代表製造業景氣擴張；低於 50 時，表示製造業景氣趨緩。其中指數與 50 之間的差距，代表擴張或趨緩的程度。但需要注意的是差距大小，例如由 60 到 70，是指擴張的程度變大，並非指 GDP 以同比例程度成長。此外，PMI 亦可反映總體經濟波動，當 PMI 超過 42.0¹⁰時，代表整體經濟景氣(或 GDP)擴張；低於 42.0 時，表示整體經濟景氣(或 GDP)趨緩。

(三)PMI 特性

1. 發布時間早且不需修正

PMI 發布時間相較於其他經濟活動指標較早，且發布後不會再修正。例如 PMI 比 GDP 的初步(advance release)早 1 個月，比 GDP 的最終發布(final release)早 3 個月，且 GDP 之後會進行修正；相較於美國經濟諮商理事會(The Conference Board)的同時指標(composite coincident index)，PMI 發布時間早 3 個星期。此外，同時指標四個構成項目中，製造業及商業銷售(Manufacturing and trade sales)資料在發布時間 2 個星期後才能取得，而所有構成項目在兩個月內仍需再修正。相較之下，PMI 為原始資料且不再更動，僅於每年 1 月對季節調整因子做修正，具有不須一再修正的優點。(Palaez,2003)

2. 偵測經濟變化

營運調查使用的問題形式是詢問填答者與上月相較，本月經濟活動轉好、不變或轉壞，此種調查技術係直接偵測變化。

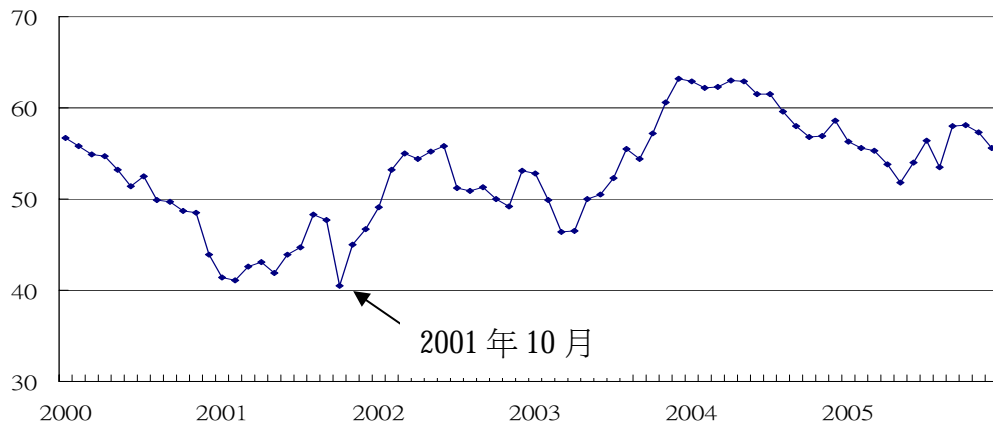
¹⁰ 該數字係由 ISM 使用迴歸計算，每月會公布於營運報告。

Kauffman(1996)指出對變化的偵測，就像測量速度的加速或減速時，瞬間速度的變化會提前反映整體速度的改變，經濟活動變化的轉折點也會比經濟活動本身轉折點更早發生，因此 PMI 可提前顯示總體經濟的變化。

3. 可反映單一事件對經濟的衝擊

由下圖可看出單一事件對經濟的衝擊。Ore(2002)指出 2001 年 911 事件發生前，美國經濟正由 Y2K 和網路泡沫危機中復甦，當年 9 月 PMI 為 47.7%，較 8 月略降。但 10 月 PMI 下降了 7.2 個百分點，明確反映出衰退。由於聯邦準備理事會降低利率以刺激經濟復甦，PMI 恢復上升，當年 12 月已回升到 46.7%。

圖一 九一一事件對 PMI 的影響



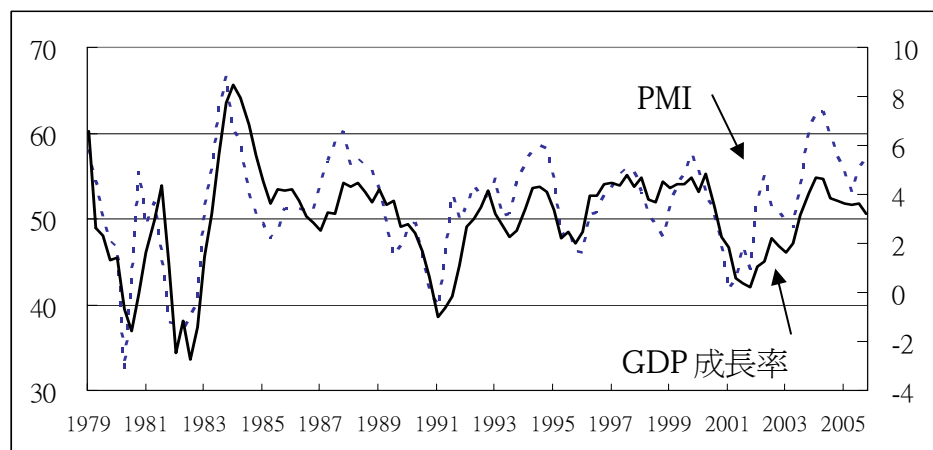
資料來源：ISM 網站

四、PMI 與總體經濟之關聯性

(一) PMI 與景氣循環

Kauffman(1999)指出,數個研究 ISM 指數的文獻均顯示,PMI 與實質 GDP 或 GNP 成長率有高度相關性,相關係數高達 0.76 到 0.91。Torda(1985)發展出 PMI 後,評估用 PMI 預測製造業短期景氣波動和總體經濟活動的表現,發現 PMI 具有領先景氣循環轉折點的特性。他使用 PMI 與美國商務部經濟分析局(Bureau of Economic Analysis)發布的領先指標和同時指標比較,結果發現 PMI 明顯領先同時指標轉折點;至於領先指標,PMI 亦有領先特性,但領先時間較短,並且領先谷底較為明顯。Kauffman(1996)則指出 PMI 領先景氣循環高峰 6 個月以上,但相較於谷底,PMI 約為同時或僅領先數個月。Buddress and Raedels(1999)亦指出 PMI 領先的時間約 1 季。領先期數雖各不相同,但學者們均認為 PMI 領先景氣循環轉折點,原因是由於 PMI 為測量變化的指標,相較於測量水準值的指標,可以提前偵測景氣循環的高峰谷底。

圖二 GDP 成長率與 PMI 指數



資料來源：1. ISM 網站

2. CEIC

(二)PMI 與金融市場

PMI 亦是金融市場的重要指標。PMI 於每月第一個營業日發布後，便會引起債券和股票價格波動。Fleming and Remolona(1997)認為 ISM 調查是影響美國長期公債買賣第七大重要因素。Ederington and Lee(1993, 1996)亦發現 ISM 調查會影響美國長期公債利率及歐元市場。Pelaez(2003)指出金融市場會對預期外 PMI 指數反應激烈，是因為根據「政策預期假設(policy anticipations hypothesis)」，聯邦準備理事會可能會改變對聯邦資金利率(Federal Fund Rate)的目標。當聯邦準備理事會目標修正同時，市場也在預期外資訊揭露時，即時做出反應(Poole, 1998；Santomero,1991)。因此，當 PMI 指數發布時，金融市場亦會隨之調整。

Goss and Long (2002)研究 PMI 是否可預測股市變動，結果顯示 PMI 可以正確地預測道瓊指數變動，正確率高達 81%。有通貨膨脹疑慮時，S&P 指數和 PMI 的關係更為顯著，高達 80-100%(詳見表六)。

表六 PMI 對股市變動的預測

	1993 年 1 月到 1994 年 10 月		1994 年 11 月到 1996 年 2 月		1996 年 3 月到 1997 年 4 月		1997 年 5 月到 1997 年 8 月	
通貨膨脹疑慮	不顯著		顯著		不顯著		顯著	
指數	道瓊	S&P	道瓊	S&P	道瓊	S&P	道瓊	S&P
PMI 和指數同向變動	81.8%	72.7%	19.0%	19.0%	80.0%	66.7%	0%	0%
PMI 和指數反向變動	18.2%	27.3%	81.0%	81.0%	20.0%	33.3%	100%	100%

資料來源：Goss and Long (2002)

(三)如何使用 PMI 做預測

1. 預測 GDP

基於 PMI 特性和其與 GDP 的高度相關性，我們可以使用 PMI 來預估實質 GDP。依據 Kauffman(1999)引述美國商務部經濟學家 McKittrick 研究，發現 PMI 與 GDP 變動率關係式如下：

$$\text{Real GDP} = -15.1534 + 0.3476 \times \text{PMI}$$

其中實質 GDP 資料為年變動率，PMI 資料為年平均值。預測結果也許不盡精確，但這個方法仍為 GDP 變動率提供粗略的預估數字。

2. 預測景氣循環轉折點

如前所述，PMI 具有領先景氣循環轉折點的特性，可用以偵測景氣循環的高峰谷底。至於領先期數多長，各研究結論不一。本研究使用 OECD 循環性分析系統(OECD Cyclical Analysis System)，以美國商務部及經濟經濟諮商理事會發布的景氣領先指標及同時指標為基準數列，對 1979 年到 2005 年 PMI 資料進行轉折點相關分析，以推估領先期數。

OECD 循環性分析系統係以景氣成長循環(Growth Cycle)為基準，作法為先將數列進行平滑化及標準化後，以圖形判別 PMI 對於基準數列的峰谷對應性，並計算 PMI 與基準數列之間的交叉相關關係及比較轉折點¹¹。分析結果包括

- (1) PMI 領先或落後基準數列高峰、谷底之平均數、中位數及標準差；
- (2) PMI 與基準數列相關性分析；

¹¹ 詳見利秀蘭等(2005)。

- (3) 領先基準數列轉折點超過 2 期以上的次數與比率；
- (4) PMI 捕捉轉折點的誤差率 (Quadratic Probability Score, QPS)¹²。

結果發現：PMI 明顯領先同時指標，領先期數高達 7 個月，領先高峰較為明顯；PMI 領先景氣領先指標時間較短，領先期數約 2 個月，領先高峰亦較為明顯，谷底則與領先指標約為同時。領先轉折點 2 個月比例高達七成，QPS 亦在 0.5 左右，顯示預測會出現轉折點的準確度尚佳。(詳見表七及圖三、圖四)

表七 PMI 循環性分析表

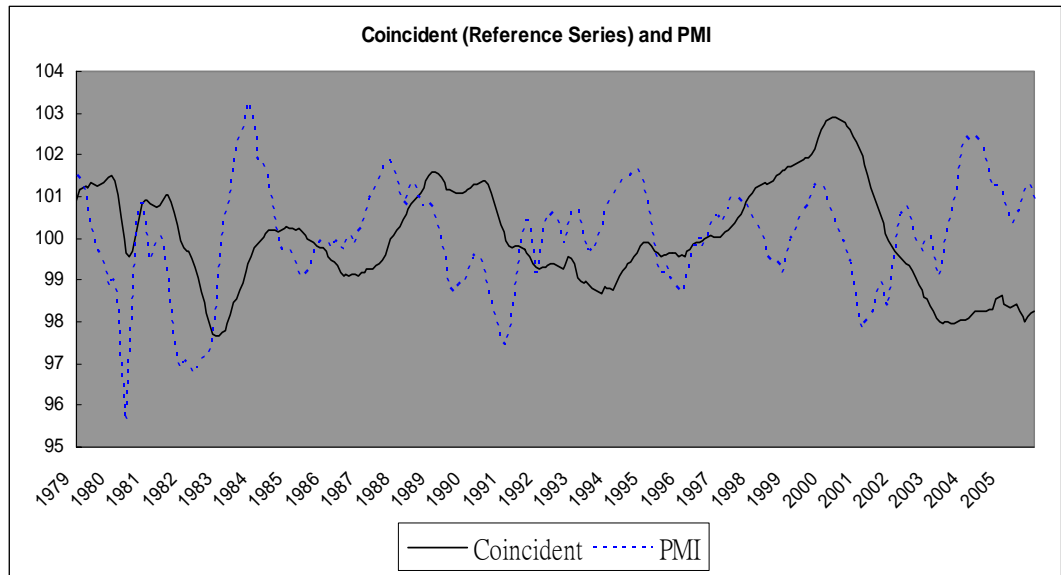
基準數列	領先期數中位數			標準差	相關性分析		領先轉折點 2 個月比例	QPS
	高峰	谷底	全部		領先期數	相關係數		
同時指標	9	6	7	12.8	11	0.20	78.5%	0.58
領先指標	4	0	2	5.0	2	0.59	66.6%	0.53

資料來源：本研究整理

註：領先期數係指 PMI 領先同時指標或領先指標之期數。

¹² QPS 係衡量一數列預測下一期會出現轉折點的準確度，QPS 值介於 0 至 2 之間，0 表示正確預測，2 表示預測失效，亦即數值越小越好。

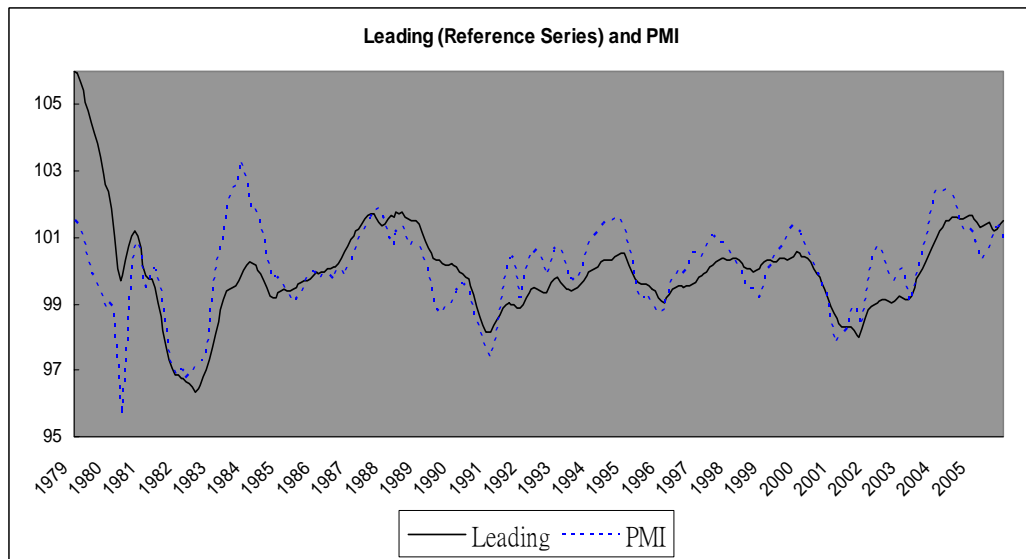
圖三 同時指標與 PMI 循環性分析



資料來源：本研究

註：數列資料係經平滑化及標準化，並非原始值。以下圖四及圖九均同。

圖四 領先指標與 PMI 循環性分析



資料來源：本研究

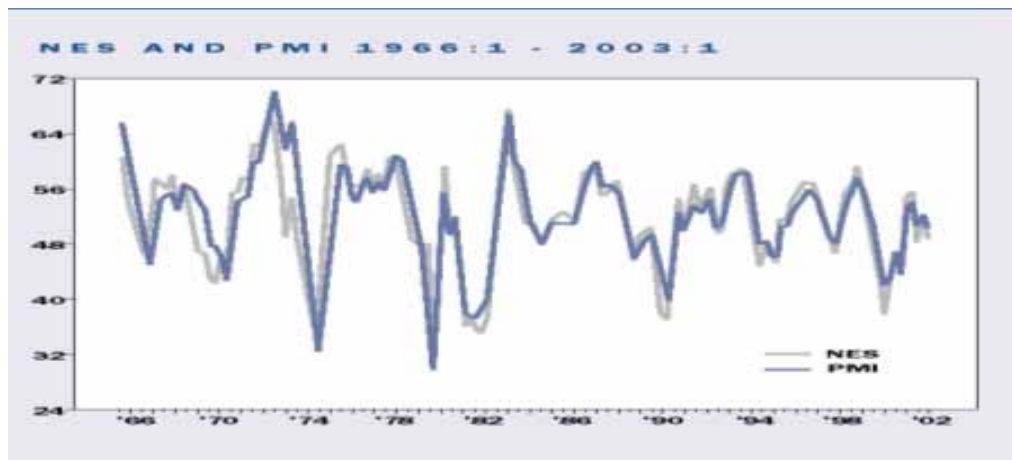
3. 其他應用

除了 PMI 以外，經濟學家仍持續尋找預測景氣的更佳方式。Kauffman(1999)研究發現由新接訂單指數減去存貨指數的「預測指數 (Forecasting Index,FI)」¹³領先實質 GNP 成長率 3 個月。Palaez(2003)則指出由 1980 年代迄今約二十餘年，許多實證研究指出經濟結構已有所改變，亦有經濟學者研發出新的計量模型¹⁴以處理結構改變 (structural breaks)，然而研究 PMI 文獻中，卻沒有人探討 PMI 構成項目之權數至今是否為最適權數。Palaez 使用 1966 年 1 月到 2003 年 1 月的資料重新進行迴歸分析，研究結果發現目前權數並非最適，他指出生產和存貨不能解釋 GDP 成長，並將 PMI 公式稍作修正，形成新指數 NES。

$$NES=0.8\times O+0.43\times E-0.23\times D$$

其中 O 代表新接訂單、E 代表就業及 D 代表供應商交貨情形。Palaez 將 NES 與 PMI 做比較，結果發現幾乎每個轉折點，NES 領先 PMI 至少一季。(見圖五)

圖五 NES 與 PMI



資料來源：Palaez(2003)

¹³ Hoagland and Taylor (1987)

¹⁴ 例如 Hamilton 的馬可夫轉換模型(Markov switching model)。

基此，本研究再以 OECD 循環性分析系統探討 PMI、NES 及 FI 對實質 GDP 成長率的領先性¹⁵，結果發現 PMI、NES 及 FI 均領先實質 GDP 成長率，三個數列在資料期間均能捕捉到每次景氣循環的谷底。FI 領先期數高達 9 個月，PMI 及 NES 均領先 3 個月，但 NES 領先轉折點 2 個月以上比例較高，且領先高峰較明顯，表現較佳(詳見表八及圖六至圖八)。此外，PMI 與 FI 呈現高度正向相關(見圖九)，可使用 FI 預估 PMI 的未來趨勢。

表八 PMI、NES 及 FI 對 GDP 成長率的循環性分析表

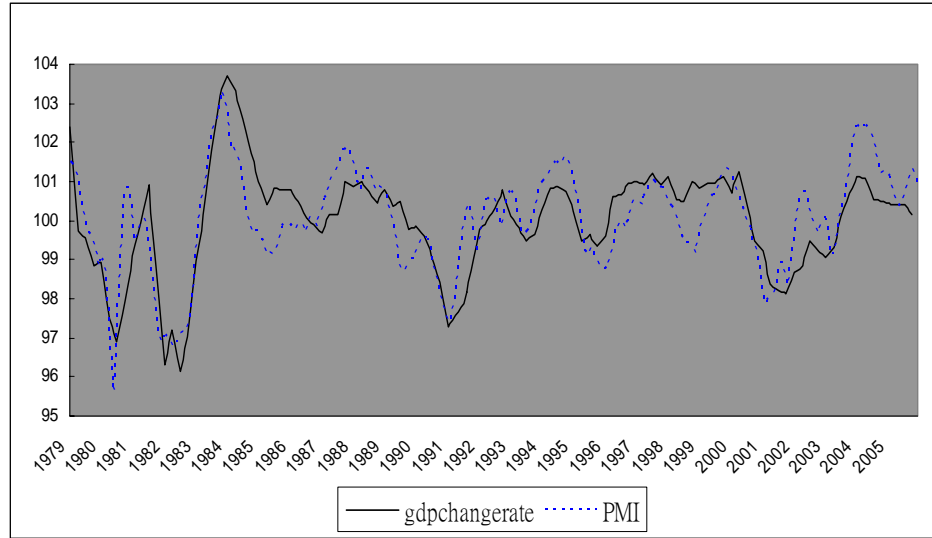
	領先期數中位數			標準 差	相關性分析		領先轉折 點 2 個月 比例	QPS
	高峰	谷底	全部		領先 期數	相關 係數		
PMI	3	3	3	6.4	2	0.80	62.5%	0.53
NES	4	3	3	5.9	2	0.79	75.0%	0.42
FI	9	9	9	8.9	6	0.54	87.5%	0.42

資料來源：本研究

註：領先期數係指 PMI、NES 及 FI 領先 GDP 成長率之期數。

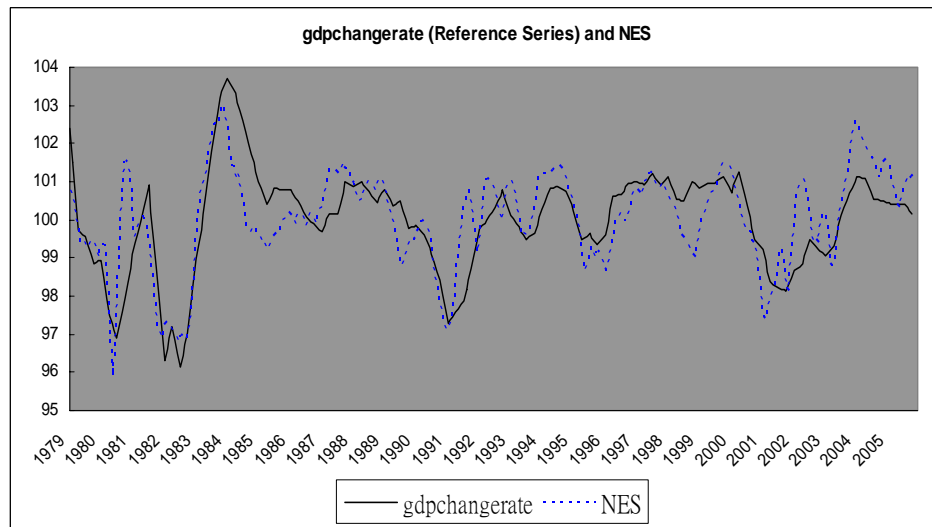
¹⁵ 資料期間由 1979 年 1 月到 2005 年 12 月。

圖六 GDP 成長率與 PMI 循環性分析



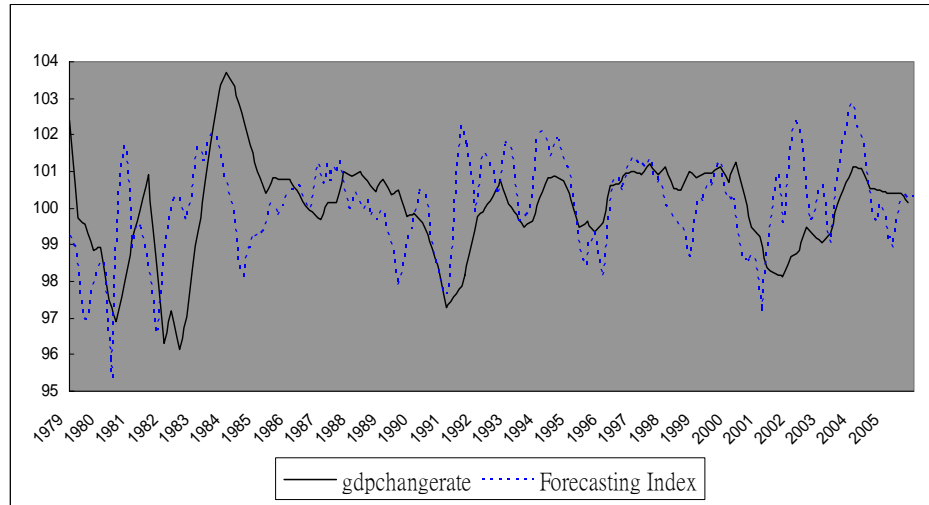
資料來源：本研究

圖七 GDP 成長率與 NES 循環性分析



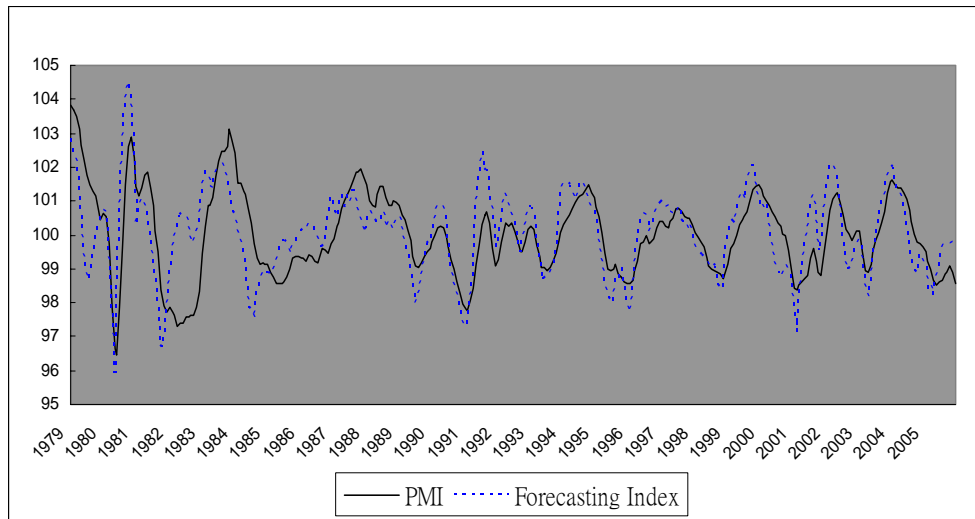
資料來源：本研究

圖八 GDP 成長率與 FI 循環性分析



資料來源：本研究

圖九 PMI 與 FI 循環性分析



資料來源：本研究

參、心得與建議事項

ISM 自 1920 年代開始蒐集屬質產業資訊，至 1980 年代經濟學家認為這些資訊應可進一步加以利用，因此將調查結果合成為 PMI 指數，用以反映景氣概況，結果成為美國重要的領先指標，其他各項調查結果也頗受重視。本研究簡要介紹 ISM 進行營運調查的過程，並探討 PMI 指數。結果發現 ISM 的營運調查係結合第一手採購經理人的專業意見，具相當可信度，調查結果可善加利用，例如透過價格指數預測未來通貨膨脹、查看供給短缺清單發現潛在供給瓶頸等。調查結果中最受矚目的 PMI 具有發布時間早、不須修正、偵測變化及反映單一事件對經濟衝擊等特點，可即時反映景氣現況。由於提前偵測變化，PMI 可做為預測短期景氣概況的工具，並可預估 GDP 數字。

PMI 已逐漸受到許多國家採用，本文探討該指數的編製和應用，希冀對我國的產業調查有所助益。參考美國 ISM 作法茲提出下列幾點建議：

一、可建立我國製造業及非製造業之屬質調查：國內產業調查係以屬量調查居多，為取得精確資料，發布時間較為落後，不能即時反映景氣現況。建議可建立我國製造業及非製造業之屬質調查，詢問企業高階主管對市場變化的第一手訊息。由於屬質調查資料為主觀專業看法，不需屬量數字，可當期發布且多無需修正，較一般經濟指標更能提供即時訊息。並且許多指標具有領先性，可用以預測未來景氣變化，建議可參考國外運用屬質產業調查進行預測之方法，善加利用我國屬質調查資料，以期將調查資料發揮最大效益。

二、與產業協會合作或採取委外：將問卷送達適當填答者，為屬質調查成功的重要關鍵。ISM 本身為供應管理協會，調查對象即為協會成員，協會亦會提供調查結果及應用方法給會員，在互惠關係下合作度較高，因此建議如政府部門要從事調查時，可以與產業公會合作，例如欲編製

PMI 指數，可考慮與中華採購管理協會進行合作，或可採取團體委外形式，委託專業的調查機構，加強追蹤控管問卷填寫的對象是否合宜。

三、加強屬質調查專業知識：隨著時間經過，經濟結構可能發生變化，因此在權數或季節調整技術，或仍有改善的空間。調查方式亦會隨時間改變，例如早期多為郵寄傳真，現已有上網填報或電子郵件回覆等方式。ISM 定期舉辦調查研討會，提供會員分享調查專業知識，也協助成立新調查。另有其他國際機構(例如 OECD)亦提供許多屬質調查資訊，從事調查人員可善用這些資源，未來在進行我國屬質產業調查及應用調查結果時，可時時檢視調查方法加以改進。

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DEFINITIONS FOR USE WITH ISM MANUFACTURING BUSINESS SURVEY QUESTIONNAIRE

1. GENERAL REMARKS – Report any comments you care to make regarding any business condition (local, national or international) that affects your purchasing operation or the outlook for your company or industry. Your opinion and comments here are very important.
2. PRODUCTION – Check the **ONE** box that best expresses the *current* month’s level of production in your plant, division or company *compared with the previous month*.
3. NEW ORDERS – Check the **ONE** box that best expresses the *current* month’s new orders in your plant, division or company *compared with the previous month*.
4. BACKLOG OF ORDERS - Check the **ONE** box that best expresses the *current* month’s backlog of orders (unfilled sales orders) *compared with the previous month* OR check “Do not measure backlog of orders.”
5. NEW EXPORT ORDERS - Check the **ONE** box that best expresses the *current* month’s new export orders *compared with the previous month* OR check “Do not export.”
6. COMMODITY PRICES – This category has two parts:
 - A. Indicate the *current* month’s level of change in prices of the commodities you buy *compared with the previous month*. This may or may not involve announced price changes. If some commodity prices are up and some are down, use an approximate net weighted average of all price changes to determine your answer.
 - B. List specific commodities (e.g., connectors rather than electronic items) or, if appropriate, specific categories of commodities (e.g., adhesives) that are up in price or down in price since your last report. Please *use generic names* rather than proprietary names.
7. INVENTORIES OF PURCHASED MATERIALS – Check the *current* month’s overall inventory level (units, not dollars) of your purchased materials, including raw, MRO, components or intermediates, etc., *compared with the previous month*. Do not report inventories of your company’s product for sale (finished goods), unless they were *purchased*.
8. IMPORTS – Check the **ONE** box that best expresses the *current* month’s OVERALL imports (units, not dollars) including raw, MRO, components, intermediates and *purchased* units of your company’s product for sale (finished goods), *compared with the previous month* OR check “Do not import.”
9. EMPLOYMENT – Check the *current* month’s overall level of employment in your own plant, division or company *compared with the previous month*.
10. SUPPLIER DELIVERIES – Check the **ONE** box that best expresses the *current* month’s delivery performance *compared with the previous month*. If deliveries of some materials are faster and others slower, use an approximate net weighted average of all deliveries to determine your answer.
11. ITEMS IN SHORT SUPPLY – Report specific commodities, materials or finished products you buy that are in short supply, *even if mentioned in previous reports*. Please *use generic names* rather than proprietary names.
12. BUYING POLICY – Indicate in the appropriate box the approximate weighted number of days ahead for which you are committed or contracted (and can’t cancel without penalty) for purchases of production materials, MRO supplies and capital expenditures. Please check only ONE time frame for each category of purchases. This is not lead time required to obtain materials unless the two are coincidental. Do not indicate “same as last month” and do not report hedging or speculative purchases.

附件二：ISM 非製造業營運調查問卷及說明

ISM NON-MANUFACTURING BUSINESS SURVEY

Answers should reflect the responsibility level of **YOUR** purchasing organization (division, company or other organization) and essentially only for the SIC indicated after your name. It is essential that questions only have **ONE** answer and that **ALL** questions are answered. You are encouraged to consult with others in your company or organization in order to provide current and accurate answers to all the questions.

Return To:

Ralph G. Kauffman, Ph.D., C.P.
Chair, Non-Manufacturing Surv
P.O. Box 22165
Tempe, AZ 85285-2165

Or send facsimile to:

480/752-3902 (Confidentialia)

1. **GENERAL REMARKS** - Comment regarding any business condition (local, national or international) that affects your purchasing operation or the outlook for your company or organization:

2. **LEVEL OF BUSINESS ACTIVITY** - Check the **ONE** box that best expresses the current month's level (units, not dollars) of overall business activity (work units, hours or other measure) compared to the previous month.

Higher than a month ago Same as a month ago Lower than a month ago
Reason if higher or lower:

3. **NEW ORDERS OR ACTIVITY REQUESTS** - Check the **ONE** box that best expresses the current month's level of new business or activity (units, not dollars) compared to the previous month.

Higher than a month ago Same as a month ago Lower than a month ago
Reason if higher or lower:

4. **BACKLOG OF ORDERS OR ACTIVITY REQUESTS** - Check the **ONE** box that best expresses the current month's level (units, not dollars) of unfilled orders or requests compared to the previous month.

Do not measure backlog Higher than a month ago Same as a month ago Lower than a month ago
Reason if higher or lower:

5. **NEW ORDERS FOR WORK OUTSIDE THE U.S.** - Check the **ONE** box that best expresses the current month's level (units, not dollars) compared to the previous month.

Do not perform/measure Higher than a month ago Same as a month ago Lower than a month ago
Reason if higher or lower:

6. **INVENTORIES OF PURCHASED MATERIALS** - Check the **OVERALL** inventory levels (units, not dollars) of materials used in your business or activities compared to the previous month.

Do not have inventories Higher than a month ago Same as a month ago Lower than a month ago
Reason if higher or lower:

If you have inventories of purchased materials, how does their level **THIS MONTH** compare to your desired levels?

Above desired level About right (at desired level) Below desired level

7. **IMPORTS** - Check the **ONE** box that best expresses the current month's **OVERALL** use of imported materials (units, not dollars) in your business or activities compared to the previous month.

Do not use imports Higher than a month ago Same as a month ago Lower than a month ago
Reason if higher or lower:

8. **PRICES PAID** - Check the **ONE** box that best expresses the current month's level of approximate net weighted average prices paid for purchased commodities and/or services compared to the previous month.

Higher than a month ago Same as a month ago Lower than a month ago
List specific commodities and/or services (generic names) which are up or down in price this month compared to the previous month.

UP _____ IN _____ PRICE: _____

DOWN _____ IN _____ PRICE: _____

9. **EMPLOYMENT** - Check the **ONE** box that best expresses the current month's **OVERALL** level of employment (including temporary or contract personnel) compared to the previous month.

Higher than a month ago Same as a month ago Lower than a month ago
Reason if higher or lower:

10. **SUPPLIER DELIVERIES** - Check the **ONE** box that best expresses the current month's **OVERALL** delivery performance for purchased commodities and services compared to the previous month.

Faster than a month ago Same as a month ago Slower than a month ago
Reason if faster or slower:

11. **ITEMS IN SHORT SUPPLY** - Report specific commodities and services (use generic names, not proprietary) you purchase that are in short supply, even if mentioned in previous reports: _____



DEFINITIONS FOR USE WITH ISM NON-MANUFACTURING BUSINESS SURVEY QUESTIONNAIRE

1. **GENERAL REMARKS** - Self explanatory
2. **LEVEL OF BUSINESS ACTIVITY** - May be measured by person-hours, units of work accomplished, number of crews working or similar non-monetary measures. The reason for non-monetary indicators for this and several other questions is to prevent inflation from affecting the data over a period of time.
3. **NEW ORDERS OR ACTIVITY REQUESTS** - Orders or other forms of requests for service or activity received during the month whether or not fulfilled during the month. Again, use non-monetary measures. It may be convenient to use the same unit of measure for this question and for question 2.
4. **BACKLOG OF ORDERS OR ACTIVITY REQUESTS** - Orders or other forms of requests for activity that have been received but not yet fulfilled (regardless of when they were received). Also needs to be a non-monetary measure and should be the same unit of measure used for question 3.
5. **NEW ORDERS FOR WORK OUTSIDE THE UNITED STATES** - The intent of this question is to get an indication of change in the level of exported service or other non-manufacturing activity. Included should be work performed in the United States for external clients (e.g., development of software in the United States for use by a client in the United Kingdom or work to be performed by your U.S.-based personnel in other countries, e.g., development of software in the United Kingdom for a U.K. client by your United States personnel. Do not include orders for work to be performed by foreign subsidiaries or by personnel based in foreign countries. Use the same unit of measure as for questions 3 and 4. If you do not perform work for export or with U. S.-based personnel at locations outside the U.S., do not answer this question.
6. **INVENTORIES OF PURCHASED MATERIALS** - If you have inventories of materials used in your business or activities, indicate direction of change, if any, in overall inventory quantities and whether these quantities are above, equal to or below desired inventory levels.
7. **IMPORTS** - If you use imported materials in your business or activities, indicate direction of change, if any, in their use in the current month compared to the previous month.
8. **PRICES PAID** - Approximate overall weighted average prices paid for materials and services purchased for the conduct of your business.
9. **EMPLOYMENT** - Level of employment in your organization including temporary and contract personnel.
10. **SUPPLIER DELIVERIES** - Overall delivery performance versus the previous month of suppliers of materials and services purchased for the conduct of your business. If items and services are more readily obtainable this month than last month, then delivery performance is faster than a month ago. This item is not intended to measure actual versus expected delivery performance.
11. **ITEMS IN SHORT SUPPLY** - Commodities and services that you purchase for the conduct of your business that are in short supply this month (i.e. difficult to obtain versus what you consider “normal” for those items).

附件三：ISM 製造業營運報告(以 2006 年 3 月為例)

FOR RELEASE: 10:00 A.M. ET APRIL 3, 2006

Contact: Rose Marie Goupil
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DO NOT CONFUSE THIS NATIONAL REPORT with the various regional purchasing reports released across the country. The national report's information reflects the entire United States, while the regional reports contain primarily regional data from their local vicinities. Also, the information in the regional reports is not used in calculating the results of the national report. The information compiled in this report is for the month of March 2006.

March Manufacturing ISM Report On Business®

PMI at 55.2%

New Orders, Production, Employment Expanding

Deliveries Slowing, Prices Increasing

(Tempe, Arizona) — Economic activity in the manufacturing sector grew in March for the 34th consecutive month, while the **overall economy** grew for the 53rd consecutive month, say the nation's supply executives in the latest **Manufacturing ISM Report On Business®**.

The report was issued today by Norbert J. Ore, C.P.M., chair of the Institute for Supply Management™ Manufacturing Business Survey Committee. "The manufacturing sector, led by continued strength in new orders and production, continued to grow in March. The first quarter is now complete, and the ISM data indicates that it was a good quarter for U.S. manufacturing. Prices are still a major concern, particularly in the energy and metals markets. In general, manufacturing continues to experience a significant level of growth."

TOP PERFORMING INDUSTRIES

The 15 industries reporting growth in March — listed in order — are: Miscellaneous*; Apparel; Textiles; Petroleum; Industrial & Commercial Equipment & Computers; Printing & Publishing; Primary Metals; Transportation & Equipment; Wood & Wood Products; Chemicals; Electronic Components & Equipment; Fabricated Metals; Instruments & Photographic Equipment; Food; and Paper.

WHAT RESPONDENTS ARE SAYING ...

- "Demand appears to be softening." (Chemicals)
- "Overall sales have seen an increase of 20 percent over the past quarter." (Electronic Components & Equipment)
- "Business is very strong in all sectors." (Food)
- "Energy-related costs appear to be stabilizing, but metals look like they are in for another run-up shortly." (Instruments & Photographic Equipment)

- "Slight uptick in business. Still haunted by price increases related to oil and energy." (Printing & Publishing)

MANUFACTURING AT A GLANCE MARCH 2006						
Index	Series Index March	Series Index February	Percentage Point Change	Direction	Rate of Change	Trend* (Months)
PMI	55.2	56.7	-1.5	Growing	Slower	34
New Orders	58.4	61.9	-3.5	Growing	Slower	35
Production	57.5	57.4	+0.1	Growing	Faster	35
Employment	52.5	55.0	-2.5	Growing	Slower	10
Supplier Deliveries	53.1	52.2	+0.9	Slowing	Faster	33
Inventories	48.7	49.6	-0.9	Contracting	Faster	12
Customers' Inventories	48.0	48.5	-0.5	Too Low	Faster	58
Prices	66.5	62.5	+4.0	Increasing	Faster	8
Backlog of Orders	59.5	54.5	+5.0	Growing	Faster	3
Exports	57.3	57.0	+0.3	Growing	Faster	40
Imports	57.0	57.5	-0.5	Growing	Slower	51
OVERALL ECONOMY				Growing	Slower	53
Manufacturing Sector				Growing	Slower	34

*Number of months moving in current direction

COMMODITIES REPORTED UP/DOWN IN PRICE and IN SHORT SUPPLY

Commodities Up in Price

Aluminum (8); Aluminum Extrusions; Aluminum Products (4); Carbon Black; Copper (10); Copper Products (4); Corrugated Containers (5); Electronic Components; Flour; Freight; Natural Rubber; Paper (3); Particle Board; Stainless Steel (2); Steel; Steel - Hot Rolled; and Sugar (2).

Commodities Down in Price

Caustic and Natural Gas (3).

Commodities in Short Supply

There were no commodities reported in short supply this month.

Note: The number of consecutive months the commodity is listed is indicated after each item.

MARCH 2006 MANUFACTURING INDEX SUMMARIES

PMI

The PMI indicates that the manufacturing economy grew in March for the 34th consecutive month as it registered 55.2 percent, a decrease of 1.5 percentage points when compared to February's seasonally adjusted reading of 56.7 percent. A reading above 50 percent indicates that the manufacturing economy is generally expanding; below 50 percent indicates that it is generally contracting.

A PMI in excess of 42 percent, over a period of time, generally indicates an expansion of the overall economy. The March PMI indicates that both the overall economy and the manufacturing sector are growing. The past relationship between the PMI and the overall economy indicates that the average PMI for January through March (55.6 percent) corresponds to a 4.7 percent increase in real gross domestic product (GDP). In addition, if the PMI for March (55.2 percent) is annualized, it corresponds to a 4.5 percent increase in real GDP annually.

THE LAST 12 MONTHS

<i>Month</i>	<i>PMI</i>	<i>Month</i>	<i>PMI</i>
Mar 2006	55.2	Sep 2005	58.0
Feb 2006	56.7	Aug 2005	53.5
Jan 2006	54.8	Jul 2005	56.4
Dec 2005	55.6	Jun 2005	54.0
Nov 2005	57.3	May 2005	51.8
Oct 2005	58.1	Apr 2005	53.8
Average for 12 months – 55.4 High – 58.1 Low – 51.8			

New Orders

ISM's New Orders Index grew in March with a reading of 58.4 percent. The index is 3.5 percentage points lower than the seasonally adjusted 61.9 percent registered in February. March is the 35th consecutive month the index has exceeded 50 percent. A New Orders Index above 51.1 percent, over time, is generally consistent with an increase in the Census Bureau's series on manufacturing orders (in constant 2000 dollars). Fourteen industries reported increases during March: Petroleum; Miscellaneous*; Textiles; Printing & Publishing; Primary Metals; Industrial & Commercial Equipment & Computers; Transportation & Equipment; Apparel; Wood & Wood Products; Paper; Chemicals; Fabricated Metals; Instruments & Photographic Equipment; and Electronic Components & Equipment.

New	%	%	%	%	%

Orders	Better	Same	Worse	Net	Index
Mar 2006	37	51	12	+25	58.4
Feb 2006	38	51	11	+27	61.9
Jan 2006	30	54	16	+14	58.0
Dec 2005	30	50	20	+10	59.1

Production

ISM's Production Index registered 57.5 percent in March, 0.1 percentage point higher than the seasonally adjusted 57.4 percent reported in February. March is the 35th consecutive month of growth in the index. An index above 50 percent, over time, is generally consistent with an increase in the Federal Reserve Board's Industrial Production figures. Of the industries reporting in March, 13 registered growth: Miscellaneous*; Industrial & Commercial Equipment & Computers; Instruments & Photographic Equipment; Apparel; Printing & Publishing; Wood & Wood Products; Textiles; Primary Metals; Chemicals; Transportation & Equipment; Electronic Components & Equipment; Fabricated Metals; and Food.

Production	% Better	% Same	% Worse	Net	Index
Mar 2006	34	52	14	+20	57.5
Feb 2006	34	50	16	+18	57.4
Jan 2006	29	55	16	+13	56.6
Dec 2005	27	58	15	+12	57.8

Employment

ISM's Employment Index expanded for the 10th consecutive month in March. The index registered 52.5 percent in March compared to the seasonally adjusted 55 percent registered in February, a decrease of 2.5 percentage points. An Employment Index above 48.9 percent, over time, is generally consistent with an increase in the Bureau of Labor Statistics (BLS) data on manufacturing employment. The nine industries reporting growth in employment during March are: Miscellaneous*; Apparel; Textiles; Electronic Components & Equipment; Industrial & Commercial Equipment & Computers; Transportation & Equipment; Food; Primary Metals; and Chemicals.

Employment	% Higher	% Same	% Lower	Net	Index
Mar 2006	19	70	11	+8	52.5
Feb 2006	22	65	13	+9	55.0
Jan 2006	13	76	11	+2	51.3
Dec 2005	12	80	8	+4	53.6

Supplier Deliveries

The delivery performance of suppliers to manufacturing organizations was slower for the 33rd consecutive month in March. ISM's Supplier Deliveries Index for March registered 53.1 percent, an increase of 0.9 percentage point when compared to February's seasonally adjusted reading of 52.2 percent. A reading above 50 percent indicates slower deliveries. The 10 industries reporting slower supplier deliveries in March are: Miscellaneous*; Printing & Publishing; Electronic Components & Equipment; Paper; Food; Primary Metals; Transportation & Equipment; Fabricated Metals; Industrial & Commercial Equipment & Computers; and Chemicals.

Supplier Deliveries	% Slower	% Same	% Faster	Net	Index
Mar 2006	14	80	6	+8	53.1
Feb 2006	11	82	7	+4	52.2
Jan 2006	11	85	4	+7	55.3
Dec 2005	12	79	9	+3	52.9

Inventories

Manufacturers' inventories declined in March for the 12th consecutive month as ISM's Inventories Index registered 48.7 percent, indicating a faster rate of liquidation when compared to February's reading of 49.6 percent (seasonally adjusted). March's index represents a 0.9 percentage point decrease from February's index. An Inventories Index greater than 42.2 percent, over time, is generally consistent with expansion in the Bureau of Economic Analysis' (BEA) figures on overall manufacturing inventories (in chained 2000 dollars). The seven industries reporting higher inventories in March are: Textiles; Miscellaneous*; Fabricated Metals; Apparel; Wood & Wood Products; Food; and Chemicals.

Inventories	% Higher	% Same	% Lower	Net	Index
Mar 2006	18	64	18	0	48.7
Feb 2006	16	72	12	+4	49.6
Jan 2006	13	69	18	-5	46.5
Dec 2005	12	69	19	-7	47.3

*Customers' Inventories***

The March Customers' Inventories Index is at 48 percent, 0.5 percentage point lower than the 48.5 percent reported in February. The index indicates that respondents believe their customers do not have sufficient inventories on hand (inventories are too low) at this time. This is the 58th consecutive month that the index has registered below 50 percent. Eight industries reported higher customers' inventories during March: Miscellaneous*; Instruments & Photographic Equipment; Paper; Chemicals; Rubber & Plastic Products; Food; Primary Metals; and Fabricated Metals.

Customers' Inventories	% Reporting	% Too High	% About Right	% Too Low	Net	Index
Mar 2006	68	14	68	18	-4	48.0

Feb 2006	75	15	67	18	-3	48.5
Jan 2006	75	9	74	17	-8	46.0
Dec 2005	76	13	70	17	-4	48.0

*Prices***

In March, the ISM Prices Index was 66.5 percent, indicating manufacturers are paying higher prices on average when compared to February. While 42 percent of supply executives reported paying higher prices and 9 percent reported paying lower prices, most of the respondents (49 percent) reported that prices were unchanged from the preceding month.

A Prices Index above 47.1 percent, over time, is generally consistent with an increase in the Bureau of Labor Statistics (BLS) Index of Manufacturers Prices. In March, 15 industries reported paying higher prices: Tobacco; Printing & Publishing; Petroleum; Furniture; Fabricated Metals; Transportation & Equipment; Glass, Stone & Aggregate; Electronic Components & Equipment; Wood & Wood Products; Food; Industrial & Commercial Equipment & Computers; Textiles; Primary Metals; Instruments & Photographic Equipment; and Chemicals.

Prices	% Higher	% Same	% Lower	Net	Index
Mar 2006	42	49	9	+33	66.5
Feb 2006	36	53	11	+25	62.5
Jan 2006	38	54	8	+30	65.0
Dec 2005	37	52	11	+26	63.0

*Backlog of Orders***

ISM's Backlog of Orders Index registered 59.5 percent, indicating manufacturers' backlogs in March are expanding when compared to February. The index is 5 percentage points higher than the 54.5 percent reported in February. Of the 85 percent of respondents who report their backlog of orders, 34 percent reported greater backlogs, 15 percent reported smaller backlogs, and 51 percent reported no change from February. The 14 industries reporting an increase in order backlogs during the month are: Miscellaneous*; Textiles; Primary Metals; Transportation & Equipment; Wood & Wood Products; Apparel; Printing & Publishing; Paper; Industrial & Commercial Equipment & Computers; Fabricated Metals; Rubber & Plastic Products; Chemicals; Instruments & Photographic Equipment; and Food.

Backlog of Orders	% Reporting	% Greater	% Same	% Less	Net	Index
Mar 2006	85	34	51	15	+19	59.5
Feb 2006	88	29	51	20	+9	54.5
Jan 2006	85	23	61	16	+7	53.5
Dec 2005	86	22	55	23	-1	49.5

New Export Orders

ISM's New Export Orders Index for March registered 57.3 percent, an increase of 0.3 percentage point when compared to February's seasonally adjusted index of 57 percent. This is the 40th consecutive month of growth in export orders. The 10 industries reporting growth in new export orders in March are: Miscellaneous*; Instruments & Photographic Equipment; Printing & Publishing; Industrial & Commercial Equipment & Computers; Transportation & Equipment; Furniture; Electronic Components & Equipment; Chemicals; Paper; and Fabricated Metals.

New Export Orders	% Reporting	% Higher	% Same	% Lower	Net	Index
Mar 2006	79	21	77	2	+19	57.3
Feb 2006	79	19	75	6	+13	57.0
Jan 2006	77	19	79	2	+17	58.5
Dec 2005	76	12	83	5	+7	54.3

*Imports***

Imports of materials by manufacturers grew during March as the Imports Index registered 57 percent. The index decreased 0.5 percentage point when compared to February's index of 57.5 percent, indicating a slower rate of growth. The 13 industries reporting growth in import activity for March are: Miscellaneous*; Wood & Wood Products; Textiles; Furniture; Instruments & Photographic Equipment; Food; Fabricated Metals; Paper; Transportation & Equipment; Rubber & Plastic Products; Chemicals; Industrial & Commercial Equipment & Computers; and Electronic Components & Equipment. (Beginning with the January 2006 report, the Imports Index no longer meets the criteria for seasonal adjustments.)

Imports	% Reporting	% Higher	% Same	% Lower	Net	Index
Mar 2006	82	19	76	5	+14	57.0
Feb 2006	80	21	73	6	+15	57.5
Jan 2006	81	20	74	6	+14	57.0
Dec 2005	80	13	79	8	+5	52.8

*Miscellaneous is a preponderance of jewelry, toys, sporting goods and musical instruments.

**The Backlog of Orders, Prices, Customers' Inventories and Imports Indexes do not meet the accepted criteria for seasonal adjustments.

Buying Policy

Average commitment leadtime for Capital Expenditures is unchanged at 118 days. Average leadtime for Production Materials increased 5 days to 55 days. Average leadtime for Maintenance, Repair and Operating (MRO) supplies increased 5 days to 29 days.

Percent Reporting							
Capital Expenditures	Hand-to-Mouth	30 Days	60 Days	90 Days	6 Months	1 Year+	Average Days

Mar 2006	24	9	11	15	30	11	118
Feb 2006	21	9	14	18	26	12	118
Jan 2006	22	9	16	15	29	9	112
Dec 2005	22	11	13	18	25	11	113
Production Materials	Hand-to-Mouth	30 Days	60 Days	90 Days	6 Months	1 Year+	Average Days
Mar 2006	19	39	23	12	4	3	55
Feb 2006	19	40	27	9	3	2	50
Jan 2006	18	39	25	12	4	2	53
Dec 2005	20	36	27	11	5	1	51
MRO Supplies	Hand-to-Mouth	30 Days	60 Days	90 Days	6 Months	1 Year+	Average Days
Mar 2006	48	34	11	5	1	1	29
Feb 2006	52	34	9	4	1	0	24
Jan 2006	53	33	11	3	0	0	22
Dec 2005	51	31	12	5	0	1	27

About this Report

The data presented herein is obtained from a survey of manufacturing supply managers based on information they have collected within their respective organizations. ISM makes no representation, other than that stated within this release, regarding the individual company data collection procedures. Use of the data is in the public domain and should be compared to all other economic data sources when used in decision-making.

Data and Method of Presentation

The **Manufacturing ISM Report On Business®** is based on data compiled from monthly replies to questions asked of purchasing and supply executives in approximately 400 industrial companies. Membership of the Business Survey Committee is diversified by Standard Industrial Classification (SIC) category, based on each industry's contribution to gross domestic product (GDP). Twenty industries from various U.S. geographical areas are represented on the committee. The 20 manufacturing Standard Industry Classification codes are: Food; Tobacco; Textiles; Apparel; Wood & Wood Products; Furniture; Paper; Printing & Publishing; Chemicals; Petroleum; Rubber & Plastic Products; Leather; Glass, Stone & Aggregate; Primary Metals; Fabricated Metals; Industrial & Commercial Equipment & Computers; Electronic Components & Equipment; Transportation & Equipment; Instruments & Photographic Equipment; and Miscellaneous (a preponderance of jewelry, toys, sporting goods and musical instruments).

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured (New Orders, Backlog of Orders, New Export Orders, Imports, Production, Supplier Deliveries, Inventories, Customers' Inventories, Employment and Prices), this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries) and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index. Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive).

The resulting single index number for those meeting the criteria for seasonal adjustments (PMI, New Orders, Production, Employment, Supplier Deliveries, Inventories and New Export Orders) is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements, and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. The PMI is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators with varying weights: New Orders - 30%; Production - 25%; Employment - 20%; Supplier Deliveries - 15%; and Inventories - 10%.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. A PMI reading above 50 percent indicates that the manufacturing economy is generally expanding; below 50 percent indicates that it is generally declining. A PMI in excess of 42.0 percent, over a period of time, indicates that the overall economy, or gross domestic product (GDP), is generally expanding; below 42.0 percent, it is generally declining. The distance from 50 percent or 42.0 percent is indicative of the strength of the expansion or decline. With some of the indicators within this report, ISM has indicated the departure point between expansion and decline of comparable government series, as determined by regression analysis.

Responses to Buying Policy reflect the percent reporting the current month's leadtime, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures, and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (five days), 30 days, 60 days, 90 days, six months (180 days), a year or more (360 days), and the weighted average number of days. These responses are raw data, never revised, and not seasonally adjusted since there is no significant seasonal pattern.

The **Manufacturing ISM Report On Business**[®] is published monthly by the Institute for Supply Management[™]. The Institute for Supply Management[™], established in 1915, is the largest supply management organization in the world as well as one of the most respected. ISM's mission is to lead the supply management profession through its standards of excellence, research, promotional activities and education. This report has been issued by the association since 1931, except for a four-year interruption during World War II.

The full text version of the **Manufacturing ISM Report On Business**[®] is posted on ISM's Web site at www.ism.ws on the first business day of every month after 10:10 a.m. (ET).

The next **Manufacturing ISM Report On Business**[®] featuring the March 2006 data will be released at 10:00 a.m. (ET) on April 3, 2006.

附件四：ISM 非製造業營運報告(以 2006 年 3 月為例)

F FOR RELEASE: 10:00 A.M. ET April 5, 2006

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DO NOT CONFUSE THIS NATIONAL REPORT with the various regional purchasing reports released across the country. The national report's information reflects the entire United States, while the regional reports contain primarily regional data from their local vicinities. Also, the information in the regional reports is not used in calculating the results of the national report. The information compiled in this report is for the month of March 2006.

March Non-Manufacturing ISM Report On Business®

Business Activity at 60.5%

New Orders Index at 59.5

Employment Index at 54.6%

(Tempe, Arizona) — Business activity in the **non-manufacturing sector** increased in March 2006, say the nation's purchasing and supply executives in the latest **Non-Manufacturing ISM Report On Business®**.

The report was issued today by Ralph G. Kauffman, Ph.D., C.P.M., chair of the Institute for Supply Management™ Non-Manufacturing Business Survey Committee; and coordinator of the Supply Chain Management Program, University of Houston-Downtown. "Non-manufacturing business activity increased for the 36th consecutive month in March," Kauffman said. He added, "Business Activity and New Orders increased at faster rates in March than in February. Inventories, New Export Orders and Imports also increased at faster rates. Backlog of Orders, Employment and Prices increased at slower rates than in February. Thirteen of 17 non-manufacturing industry sectors report increased activity in March, compared to 10 that reported increased activity in February. Members' comments in March are mostly positive concerning current business conditions. While price increases are still a topic of concern for a number of members, they are not mentioned as often as in past months. The Prices Index declined again this month, but remains in a historically high range for the ISM Non-Manufacturing Business Survey. The overall indication in March is continued economic growth in the non-manufacturing sector."

TOP PERFORMING INDUSTRIES

The 13 industries reporting growth in March — listed in order — are: Entertainment; Utilities; Mining; Insurance; Legal Services; Business Services; Retail Trade; Wholesale Trade; Public Administration; Other Services*; Finance & Banking; Communication; and Construction. The two industries reporting activity the same as last month are: Agriculture and Transportation. The two industries reporting decreased activity from February to March are: Real Estate and Health Services.

WHAT RESPONDENTS ARE SAYING ...

- "Overall slight economic improvement." (Agriculture)

- "Still high prices and shortages in major building products." (Construction)
- "Slightly higher activity overall with some price stabilization. Still extremely competitive on business (retail/consumer) side. Skills shortage for higher-level professionals beginning to occur." (Finance & Banking)
- "Sales, orders higher than last year, same period." (Insurance)
- "Business build looking towards the summer is looking very good and much stronger than anticipated and much better than 2005." (Other Services*)
- "The shortage of labor is affecting all aspects of supply management." (Other Services*)

ISM NON-MANUFACTURING SURVEY RESULTS AT A GLANCE COMPARISON OF ISM NON-MANUFACTURING AND ISM MANUFACTURING SURVEYS* MARCH 2006									
	Non-Manufacturing						Manufacturing		
Index	Series Index Mar.	Series Index Feb.	Percent Point Change	Direction	Rate of Change	Trend ** (Months)	Series Index Mar.	Series Index Feb.	Percent Point Change
Business Activity/ Production	60.5	60.1	+0.4	Increasing	Faster	36	57.5	57.4	+0.1
New Orders	59.5	56.2	+3.3	Increasing	Faster	36	58.4	61.9	-3.5
Employment	54.6	58.2	-3.6	Increasing	Slower	20	52.5	55.0	-2.5
Supplier Deliveries	54.0	52.5	+1.5	Slowing	Faster	55	53.1	52.2	+0.9
Inventories	54.0	53.0	+1.0	Increasing	Faster	5	48.7	49.6	-0.9
Prices	60.5	64.8	-4.3	Increasing	Slower	48	66.5	62.5	+4.0
Backlog of Orders	50.5	54.0	-3.5	Increasing	Slower	14	59.5	54.5	+5.0
New Export Orders	63.5	60.0	+3.5	Increasing	Faster	9	57.3	57.0	+0.3
Imports	60.5	55.0	+5.5	Increasing	Faster	2	57.0	57.5	-0.5
Inventory Sentime	63.0	63.5	-0.5	"Too High"	Lesser	106	N/A	N/A	N/A

nt									
Customers' Inventories	N/A	N/A					48.0	48.5	-0.5

* **Non-Manufacturing ISM Report On Business®** data is seasonally adjusted for Business Activity, New Orders, Prices and Employment. **Manufacturing ISM Report On Business®** data is seasonally adjusted except for Backlog of Orders, Prices, Imports and Customers' Inventories.

** Number of months moving in current direction

COMMODITIES REPORTED UP / DOWN IN PRICE, and IN SHORT SUPPLY

Commodities Up in Price

Air Fares; Aluminum (4); Aluminum Products/Wire; Beef (fresh and premium) (5); Concrete/Ready Mix; Copper (31); Copper Products (various) (5); Copy Paper (2); Corrugated (5); #1 Diesel Fuel; #2 Diesel Fuel (15); Energy; Freight/Shipping Costs; Fuel (28); Fuel Transportation; Gasoline* (28); Lumber (pine and treated); Packaging Materials (2); Paper (26); Paper (cut size); Paper Products (2); Petroleum/Petroleum Related Products (3); Plastic; Rubber Products; Seafood/Salmon; Steel (2); Steel Products (4); and Unleaded Gasoline.

Commodities Down in Price

Cheese; Chicken (2); Dairy; Gasoline* (3); Office Paper/Office Supplies (2); Plastic Bags; Polyethylene Products (various); Pork/Pork Trim (2); and Stretch Film.

Commodities in Short Supply

Aluminum; Construction Labor/Trades; Construction Services (2); Insulation; Roofing Shingles/Products (3); Skilled Labor/Qualified Personnel; Steel/Steel Products (2); and Wallboard (2).

*Reported as both up and down in price.

Note: The number of consecutive months the commodity is listed is indicated after each item.

MARCH 2006 NON-MANUFACTURING INDEX SUMMARIES

Business Activity

ISM's Non-Manufacturing Business Activity Index in March increased to 60.5 percent from February's seasonally adjusted 60.1 percent, indicating a slightly faster rate of growth of activity in March. The index thus maintains and slightly increases the level it returned to in February after a dip to 56.8 percent in January. The average of the Business Activity Index for the past 12 months remains at a relatively strong value — 59.7 percent. The faster rate of growth indicated by this index is reflected in other indexes this month: a 5.5 percentage point rise in the Imports Index, a 3.5 percentage point rise in the New Export Orders Index, and a 3.3 percentage point rise in the New Orders Index. Increased inventories to support the current level of business activity were also indicated this month by a 1 percentage point rise in the Inventories Index. This month, 13 sectors report increased business activity, two are reporting decreased activity, and two indicate unchanged activity compared to February.

The industries reporting the highest rates of growth of business activity in March are: Entertainment; Utilities; Mining; Insurance; and Legal Services. The industries reporting contraction of business activity in March are: Real Estate and Health Services.

Business Activity	% Higher	% Same	% Lower	Index
March 2006	37	53	10	60.5
February 2006	31	57	12	60.1
January 2006	27	51	22	56.8
December 2005	31	52	17	61.0

THE LAST 12 MONTHS			
Month	Business Activity Index	Month	Business Activity Index
Mar '06	60.5	Sep '05	53.7
Feb '06	60.1	Aug '05	64.8
Jan '06	56.8	July '05	60.4
Dec '05	61.0	June '05	61.1
Nov '05	59.3	May '05	59.2
Oct '05	59.2	Apr '05	60.4
Average for 12 months – 59.7 High – 64.8 Low – 53.7			

New Orders

ISM's Non-Manufacturing New Orders Index increased to 59.5 percent in March from the seasonally adjusted 56.2 percent registered in February. This indicates continued expansion of new orders at a faster rate of growth than in February. Comments from members include: "More new job orders — an increase in employee hiring opportunities for direct hire and project support"; "More first-time hotel and restaurant guests"; "Greater demand on rental cars"; and "Increase in shop orders."

Industries reporting the highest rates of growth of new orders in March are: Entertainment; Utilities; Legal Services; Retail Trade; and Wholesale Trade. No industry reported contraction of new orders in March.

New Orders	% Higher	% Same	% Lower	Index
March 2006	32	57	11	59.5
February 2006	27	59	14	56.2
January 2006	27	54	19	56.0
December 2005	32	55	13	62.2

Employment

Employment activity in the non-manufacturing sector increased, but at a slower rate in March compared to February. This was the 20th consecutive monthly increase in non-manufacturing employment. ISM's Non-Manufacturing Employment Index for March is 54.6 percent, a drop of 3.6 percentage points from February's seasonally adjusted 58.2 percent. Fourteen industries are reporting increased employment, one reports a decrease, and two indicate employment is unchanged from February. Comments from respondents include: "Building up levels for anticipated workload"; "Recruiting additional RNs and specialty physicians"; "Over 100 jobs open and available right now"; and "Leveling off after hiring spree."

The industries reporting the highest rates of growth in employment in March are: Business Services; Mining; Legal Services; Entertainment; Utilities; and Real Estate. The one industry reporting a reduction in employment in March is Wholesale Trade.

Employment	% Higher	% Same	% Lower	Index
March 2006	18	74	8	54.6
February 2006	21	69	10	58.2
January 2006	16	67	17	51.1
December 2005	21	70	9	56.9

Supplier Deliveries

The delivery performance of suppliers to non-manufacturing organizations was slower for the 55th consecutive month in March. The index registered 54 percent, 1.5 percentage points higher than in February and indicating that deliveries are slowing at a faster rate than in February. A reading above 50 percent indicates slower deliveries. Comments from purchasing and supply executives concerning supplier deliveries in March include: "Slower rail service"; "Increased shortages and longer leadtime"; "Leadtimes are stretching out by some vendors"; and "National demand high and pre- [price] increase buying kept allocations tight."

The industries reporting the highest rates of slowing in supplier deliveries in March are: Legal Services; Agriculture; Transportation; Construction; Utilities; and Other Services*. No industry reported faster supplier deliveries in March.

Supplier Deliveries	% Slower	% Same	% Faster	Index
March 2006	9	90	1	54.0
February 2006	8	89	3	52.5
January 2006	14	81	5	54.5
December 2005	16	81	3	56.5

Inventories

ISM's Non-Manufacturing Inventories Index registered 54 percent in March, indicating an increase in inventories at a faster rate of increase compared to February. This is the fifth consecutive month of reported increases in non-manufacturing inventories. Of the total respondents in March, 31 percent indicate they do not have inventories or do not measure them. Comments from members include:

"Increase inventories in support of new hospital openings"; "Preparing for spring increase in business"; "Price increase/avoidance purchases"; and "Record sales Nov/Dec 2005 pushing forecasts and inventories up."

The industries reporting the highest rates of increase in inventories in March are: Insurance; Communication; Utilities; Agriculture; and Other Services*. The industries reporting inventory decreases in March are: Entertainment; Construction; Business Services; and Public Administration.

Inventories	% Higher	% Same	% Lower	Index
March 2006	25	58	17	54.0
February 2006	24	58	18	53.0
January 2006	25	60	15	55.0
December 2005	28	56	16	56.0

Prices

Prices paid by non-manufacturing organizations for purchased materials and services increased in March for the 48th consecutive month. ISM's Non-Manufacturing Prices Index for March is 60.5 percent, 4.3 percentage points lower than February's 64.8 percent. In March, the percentage of respondents reporting higher prices decreased from 39 percent in February to 36 percent, the proportion indicating no change increased from 57 percent in February to 58 percent, and the number of respondents noting lower prices increased from 4 percent in February to 6 percent in March.

The industries reporting the highest rates of increase in prices paid in March are: Entertainment; Business Services; Mining; Construction; Utilities; and Legal Services. The one industry reporting price decreases in March is Real Estate.

Prices	% Higher	% Same	% Lower	Index
March 2006	36	58	6	60.5
February 2006	39	57	4	64.8
January 2006	37	59	4	67.2
December 2005	33	60	7	67.2

Backlog of Orders

ISM's Non-Manufacturing Backlog of Orders Index registered 50.5 percent in March, 3.5 percentage points lower than the 54 percent reported in February. This indicates that order backlogs are increasing at a slower rate in March than in February. March's report of increasing order backlogs marks 34 of the last 35 months that an increase has been reported in order backlogs. Of the total respondents in March, 42 percent indicated they do not measure backlog of orders. Purchasing and supply executives' comments on backlogs of orders include: "Winning more jobs add to backlog"; "Distributor catching up"; and "Gradual progress in reducing backlog due to additional hours worked and stable level of incoming requests."

The industries reporting increases in order backlogs in March are: Legal Services; Construction; Business Services; and Wholesale Trade. Industries reporting decreases in backlog of orders in March are: Other Services*; Health Services; and Retail Trade.

Backlog of Orders	% Higher	% Same	% Lower	Index
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March 2006	11	79	10	50.5
February 2006	18	72	10	54.0
January 2006	19	67	14	52.5
December 2005	21	66	13	54.0

New Export Orders

Orders and requests for services and other non-manufacturing activities to be provided outside of the United States by domestically based personnel increased for the ninth consecutive month in March. The March index marks 31 of the past 32 months that the index has exhibited growth. The New Export Orders Index for March is 63.5 percent, compared to February's 60 percent. Of the total respondents in March, 75 percent indicated they either do not perform, or do not separately measure, orders for work outside of the United States.

The industries reporting the highest rates of increase in new export orders in March are: Insurance; Entertainment; Finance & Banking; Utilities; and Business Services. No industry reported a decrease in new export orders in March.

New Export Orders	% Higher	% Same	% Lower	Index
March 2006	32	63	5	63.5
February 2006	28	64	8	60.0
January 2006	22	72	6	58.0
December 2005	34	55	11	61.5

Imports

In March, the ISM Non-Manufacturing Imports Index registered 60.5 percent, 5.5 percentage points higher than February's 55 percent, and indicating that use of imports increased in March for the second consecutive month. In March, 67 percent of respondents reported that they do not use or do not track the use of imported materials.

The industries reporting an increase in the use of imports in March are: Construction; Business Services; Wholesale Trade; Utilities; and Retail Trade. No industry reported a decrease in the use of imports in March.

Imports	% Higher	% Same	% Lower	Index
March 2006	24	73	3	60.5
February 2006	15	80	5	55.0
January 2006	14	71	15	49.5
December 2005	21	71	8	56.5

Inventory Sentiment

The ISM Non-Manufacturing Inventory Sentiment Index in March registered 63 percent, 0.5 percentage point lower than the 63.5 percent reported in February. This indicates that non-manufacturing purchasing and supply executives feel a slightly lesser degree of discomfort with current levels of inventory in March than they did during February. In March, 28 percent of respondents felt their inventories were too high, 2 percent indicated their inventories were too low, and 70 percent said that their inventories were about right.

The industries reporting the highest rates of feeling that their inventories are too high in March are: Communication; Transportation; Wholesale Trade; Insurance; Business Services; and Legal Services. No industry reported that its inventories are too low in March.

Inventory Sentiment	%Too High	%About Right	%Too Low	Index
March 2006	28	70	2	63.0
February 2006	33	61	6	63.5
January 2006	31	64	5	63.0
December 2005	27	64	9	59.0

*Other Services include:

Hotels, Rooming Houses, Camps, and Other Lodging Places; Personal Services; Automotive Repair, Services, and Parking; Miscellaneous Repair Services; Educational Services; Social Services; Museums, Art Galleries, and Botanical and Zoological Gardens; Membership Organizations; Engineering, Accounting, Research, Management and Related Services; and Miscellaneous Services.

About this Report

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Data and Method of Presentation

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Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured (Business Activity, New Orders, Backlog of Orders, New Export Orders, Inventory Change, Inventory Sentiment, Imports, Prices, Employment and Supplier Deliveries), this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher and slower for Supplier Deliveries) and the negative economic direction (lower and faster for Supplier Deliveries). Responses represent raw data and are never changed. Data is seasonally adjusted for Business Activity, New Orders, Prices and Employment. The remaining indexes have not indicated significant seasonality.

A weighted composite index similar to the PMI that is so popular in the **Manufacturing ISM Report On Business®** is not available. Several years of data will need to be developed before that type of non-manufacturing indicator can be developed. Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50 percent indicates that the non-manufacturing economy in that index is generally expanding; below 50 percent indicates that it is generally declining. Supplier

Deliveries is an exception. A Supplier Deliveries Index above 50 percent indicates slower deliveries and below 50 percent indicates faster deliveries.

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The next **Non-Manufacturing ISM Report On Business**[®] featuring the April 2006 data will be released at 10:00 a.m. (ET) on May 3, 2006

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附件六：ISM 地區性報告發布樣式

範例一：芝加哥

範例二：紐約

範例三：波士頓

範例四：奧斯汀

EMBARGOED
 FOR RELEASE:
 31 March 2006
 9am CT

the CHICAGO Report

National Association of Purchasing Management—Chicago

2006
March

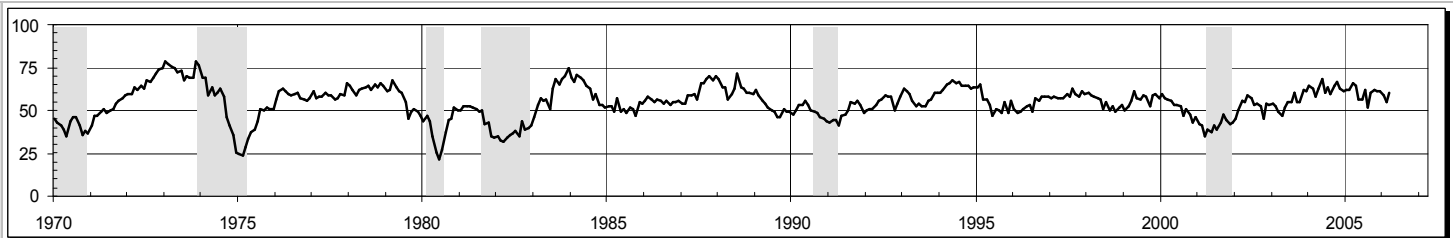
CHICAGO BUSINESS BAROMETER™ Accelerated

The Chicago Purchasing Managers report the Chicago Business Barometer accelerated after four months of slowing momentum.

- PRODUCTION and NEW ORDERS posted strong increases;
- ORDER BACKLOGS and EMPLOYMENT inched higher;
- INVENTORIES rate of growth slowed;
- BUYING POLICY: Lead-times for CAPITAL EQUIPMENT lengthened.

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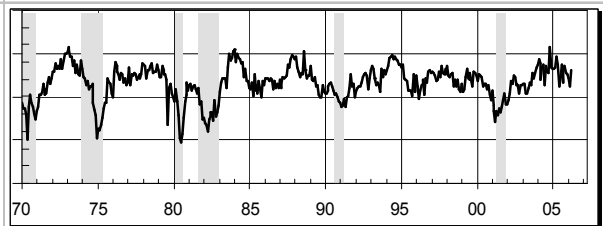


Notes: Readings in **red** (below) indicate values worse than the prior month
 Recessions are indicated by gray bars

Business Barometer		2005			2006		
	3 month average ↓	Oct	Nov	Dec	Jan	Feb	Mar
Index		60.7	59.3	55.1	56.9	58.7	62.3
	Seasonally Adjusted	61.9	60.8	60.8	58.5	54.9	60.4

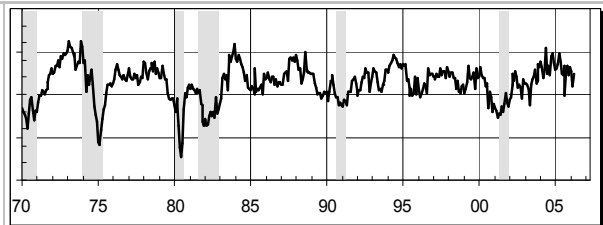
Next Release:
28 April 2006

Production		2005			2006		
	3 month average ↑	Oct	Nov	Dec	Jan	Feb	Mar
Higher		43	44	41	40	42	47
Same		38	36	30	41	38	39
Lower		19	20	29	19	20	14
Index		62.0	62.0	56.0	60.5	61.0	66.5
	Seasonally Adjusted	67.4	63.8	63.1	60.6	56.0	65.1



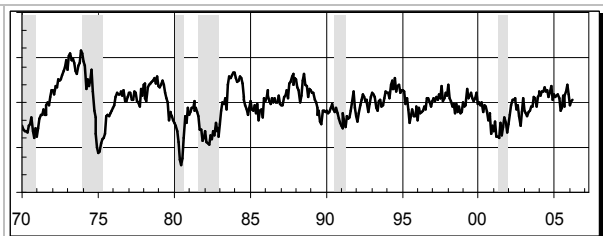
Significant turnaround

New Orders		2005			2006		
	3 month average ↓	Oct	Nov	Dec	Jan	Feb	Mar
More		50	44	43	43	45	50
Same		28	31	30	38	32	29
Fewer		22	25	27	19	23	21
Index		64.0	59.5	58.0	62.0	61.0	64.5
	Seasonally Adjusted	66.8	61.4	65.7	63.7	54.9	62.2



Recovers

Order Backlogs		2005			2006		
	3 month average ↓	Oct	Nov	Dec	Jan	Feb	Mar
Larger		38	36	32	18	34	33
Same		39	42	28	57	37	42
Smaller		23	22	40	25	29	25
Index		57.5	57.0	46.0	46.5	52.5	54.0
	Seasonally Adjusted	56.3	60.2	54.7	48.3	50.6	51.6

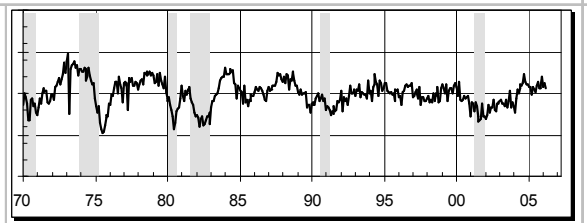


Slight increase

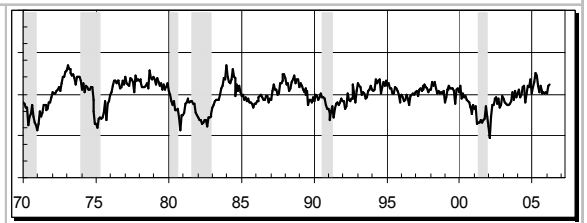
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No warranty, expressed or implied, is attached to these figures or their use. While the figures are compiled with professional care, no representations about appropriateness, accuracy, or suitability for specific applications are made.

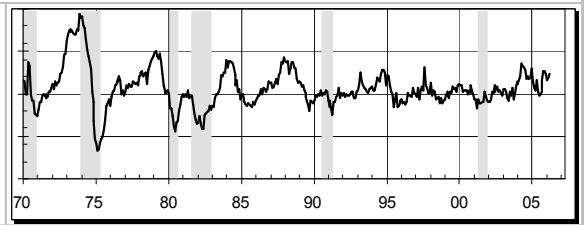
Inventories		2005			2006		
	3 month average ↓	Oct	Nov	Dec	Jan	Feb	Mar
	Larger	19	30	28	21	32	31
	Same	52	47	59	58	53	53
	Smaller	29	23	13	21	15	16
Index		45.0	53.5	57.5	50.0	58.5	57.5
	Seasonally Adjusted	52.7	54.5	59.8	53.9	56.0	53.0



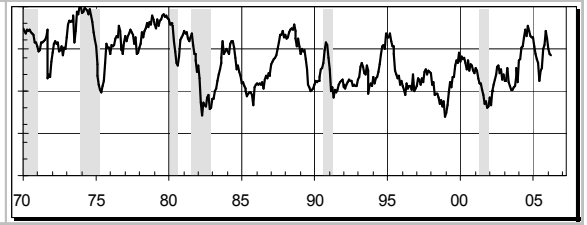
Employment		2005			2006		
	3 month average ↑	Oct	Nov	Dec	Jan	Feb	Mar
	More	12	17	18	10	27	31
	Same	73	66	64	75	56	51
	Fewer	15	17	18	15	17	18
Index		48.5	50.0	50.0	47.5	55.0	56.5
	Seasonally Adjusted	51.3	50.4	50.9	50.2	54.9	55.6



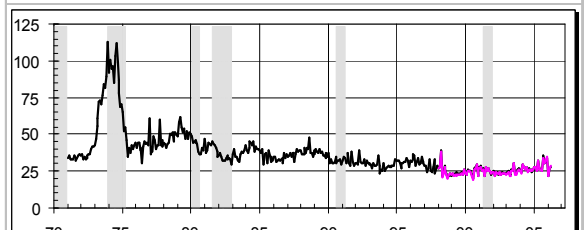
Supplier Deliveries		2005			2006		
	3 month average ↑	Oct	Nov	Dec	Jan	Feb	Mar
	Faster	4	6	5	0	5	0
	Same	68	62	72	89	74	76
	Slower	28	32	23	11	21	24
Index		62.0	63.0	59.0	55.5	58.0	62.0
	Seasonally Adjusted	63.1	63.0	61.6	57.8	59.2	61.9



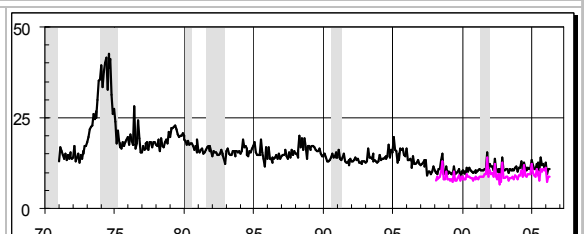
Prices Paid		2005			2006		
	3 month average ↓	Oct	Nov	Dec	Jan	Feb	Mar
	Higher	62	67	66	50	51	58
	Same	32	30	31	48	43	35
	Lower	6	3	3	2	6	7
Index		78.0	82.0	81.5	74.0	72.5	75.5
	Seasonally Adjusted	77.1	85.6	81.1	75.3	71.6	71.1



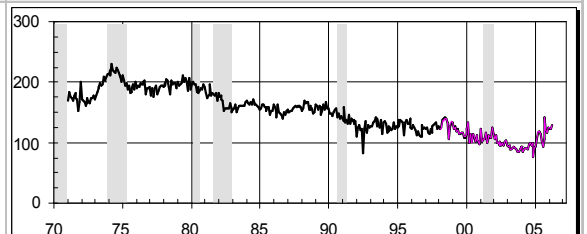
Buying Policy: Production Materials		2005			2006		
		Oct	Nov	Dec	Jan	Feb	Mar
	less than 11 days ↓	30	35	36	40	39	40
	11-15 days	11	14	16	14	11	12
	16-30 days	23	22	18	22	23	21
	31-60 days	25	19	14	17	18	20
	more than 60 days	11	10	16	7	9	7
Average Days		31.0	28.2	34.4	22.2	28.4	26.0
	Seasonally Adjusted	30.7	31.7	34.4	21.8	27.0	28.9



M.R.O. Supplies		2005			2006		
		Oct	Nov	Dec	Jan	Feb	Mar
	0-1 day ↓	13	12	7	14	11	12
	2-3 days	18	16	24	29	17	21
	4-5 days	16	22	29	21	30	24
	6-10 days	21	22	18	12	20	21
	more than 10 days	32	28	22	24	22	22
Average Days		11.7	9.3	10.5	7.7	9.0	9.2
	Seasonally Adjusted	10.9	10.4	11.2	7.3	8.7	8.8



Capital Equipment		2005			2006		
		Oct	Nov	Dec	Jan	Feb	Mar
	15 days ↑	6	9	8	15	8	8
	30 days	7	3	9	3	2	6
	60 days	18	21	14	7	15	12
	90 days	25	36	30	40	34	31
	6mths-1year	44	31	39	35	41	43
Average Days		129.5	109.0	120.6	115.3	127.1	129.1
	Seasonally Adjusted	121.3	115.8	124.3	123.9	122.7	129.6



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NAPM-New York

Report on Business



Peter Oppenheimer, C.P.M., Executive Director, NAPM - New York, (516) 466-9822

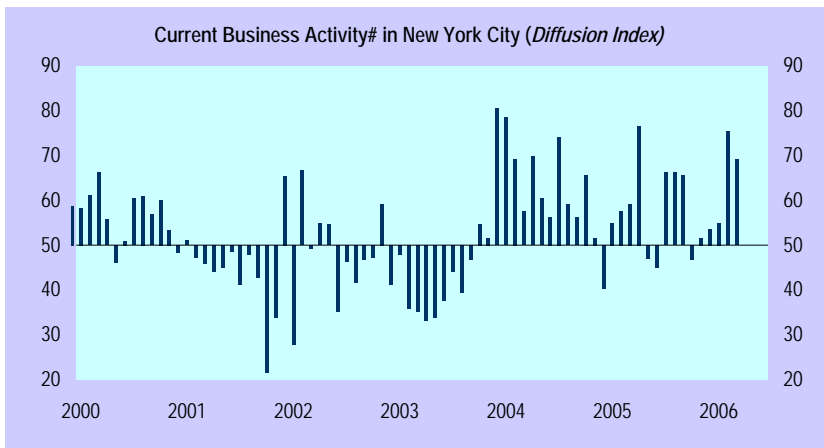
March 31, 2006

NEW YORK CITY REPORT ON BUSINESS

In Like the Proverbial Lion

The Big Apple's economy is humming, according to the March survey of the City's businesses that was conducted by the National Association of Purchasing Management-New York (NAPM-NY). March's survey is encouraging because it confirms the upswing that was reported in the February survey. It will come as no surprise that strength in the financial services businesses is an important contributor to the NAPM-NY's recent firming. Respondents remain optimistic about the outlook, although the NAPM-NY's outlook index has dropped back a bit.

The NAPM-NY Business Conditions Index (BCI), which is a measure of the cumulative strength of the New York economy, continues to advance with the latest survey result. The NAPM-NY has been a relatively good predictor of eventual employment gains. Although the City's job count has lagged the BCI index—only half the jobs lost since 2000 have been recovered—the area's job prospects look promising.



New York City Business Conditions Indexes
(Seasonally Adjusted, Except Where Noted)

	Current Conditions#	Outlook^	NY-BCI*
January 2004	78.5	88.9	257.3
February	69.2	78.6	267.2
March	57.5	62.5	271.8
April	69.8	85.7	282.2
May	60.4	62.5	287.1
June	56.3	60.0	290.9
July	74.1	78.5	302.5
August	59.1	60.0	307.1
September	56.2	60.0	310.4
October	65.7	50.0	318.0
November	51.6	64.3	321.2
December	40.2	37.5	316.3
January 2005	54.9	60.0	319.0
February	57.6	80.0	324.9
March	59.2	50.0	329.1
April	76.5	77.8	341.2
May	47.0	50.0	337.3
June	45.0	62.5	333.7
July	66.2	50.0	339.6
August	66.2	50.0	345.4
September	65.5	70.0	353.2
October	46.9	66.7	351.6
November	51.6	40.0	352.4
December	53.6	62.5	354.2
January 2006	54.9	50.0	356.7
February	75.4	73.1	369.4
March	69.1	58.3	378.9

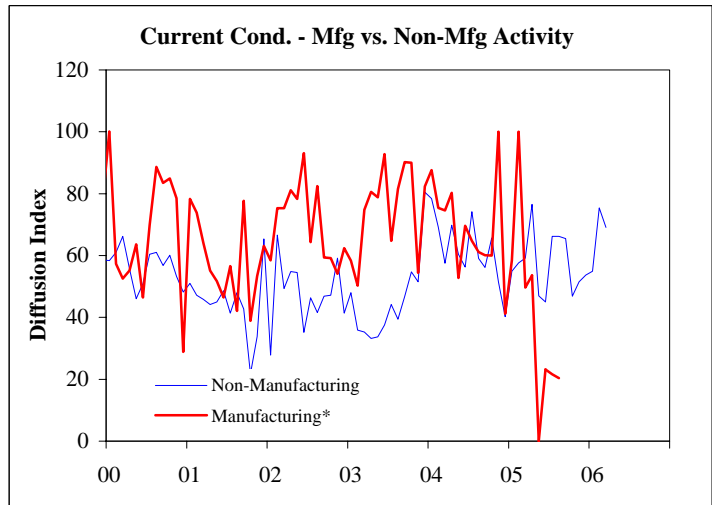
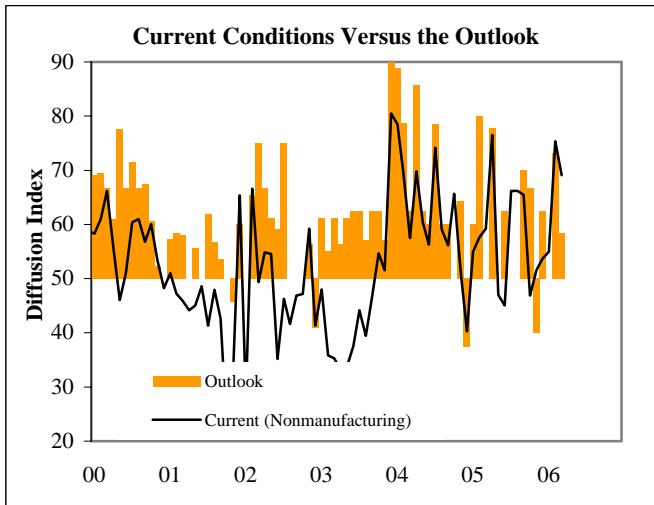
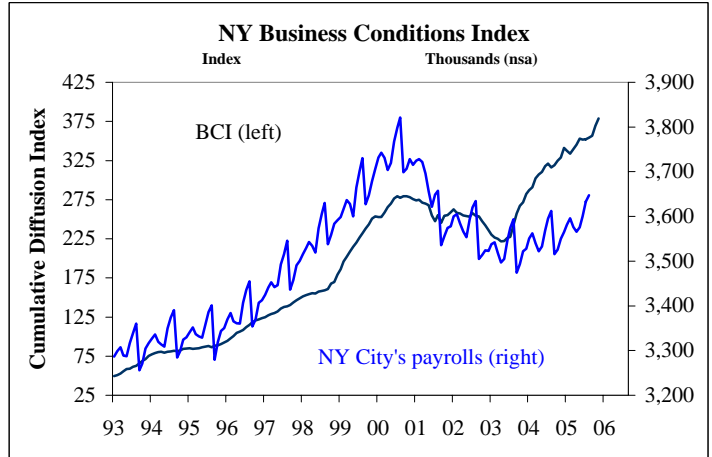
Based on responses from nonmanufacturing businesses.

^ Not seasonally adjusted. Reflects responses from both manufacturing and nonmanufacturing businesses.

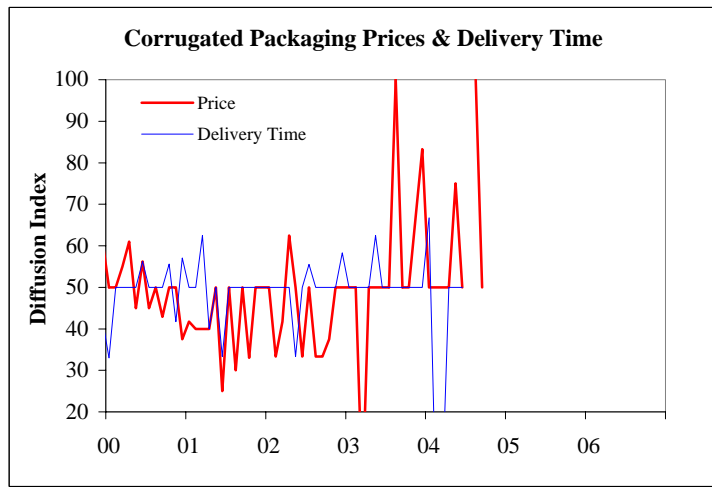
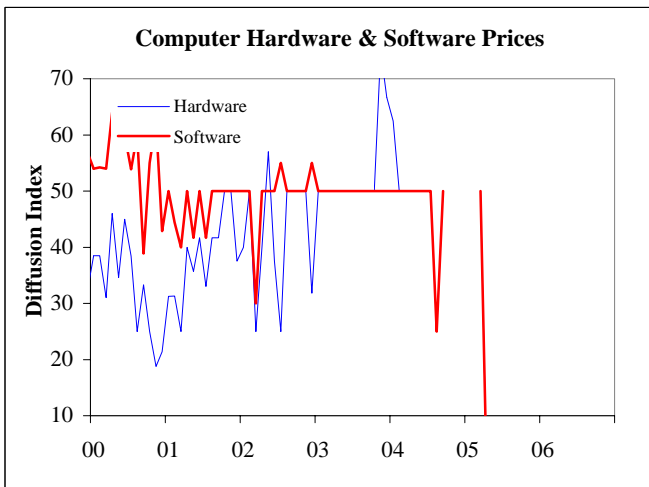
* After August 2005, the index reflects activity at nonmanufacturing businesses.

New York Business Conditions Index (NY-BCI)

The New York NAPM business conditions index (BCI) is a cumulative diffusion index of current business conditions for nonmanufacturing businesses in the New York City area. The BCI tends to precede local employment trends. Furthermore, because the count of local jobs is unavailable until one or two months later, the BCI offers advance information about forthcoming local labor market conditions. Until recently, City payrolls have lagged the recovery in the NY-NAPM's BCI (figure to the right). Lately, however, job growth appears to be picking up.



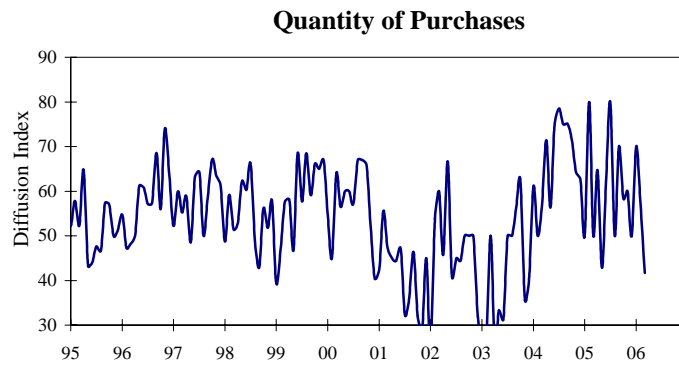
* Discontinued after August 2005



Quantity of Purchases

The overall quantity (units not dollars) of purchases, including raw materials, MRO, components, intermediates, and services, compared with the previous month.

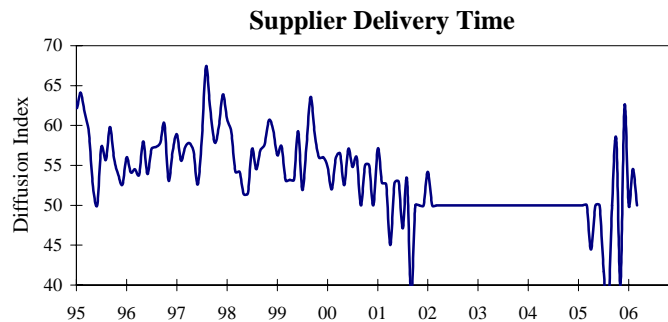
	March	Feb	Jan	Dec	Nov	Year ago March
Composite	41.67	57.69	70	50	60	56.3
Manufacturing	0	83	50	50	50	75
Non-Mfg.	50	50	75	50	63	50



Supplier Delivery Time

An aggregate evaluation of the current month's delivery performance (lead time) compared to the prior month. This index is the percent reporting slower deliveries plus one-half reporting same.

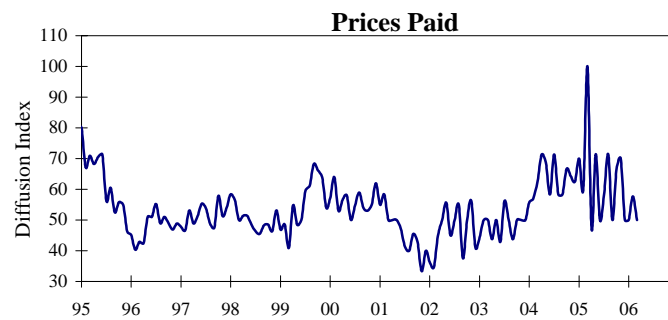
	March	Feb	Jan	Dec	Nov	Year ago March
Composite	50	55	50	63	40	50
Manufacturing	50	50	50	50	50	50
Non-Mfg.	50	56	50	50	50	50



Prices Paid

The change from the prior month in prices of items -- goods and services, purchased. This is an overall evaluation weighted by quantity of purchase.

	March	Feb	Jan	Dec	Nov	Year ago March
Composite	50	58	50	50	70	100
Manufacturing	50	67	50	50	100	100
Non-Mfg.	50	56	50	50	63	100

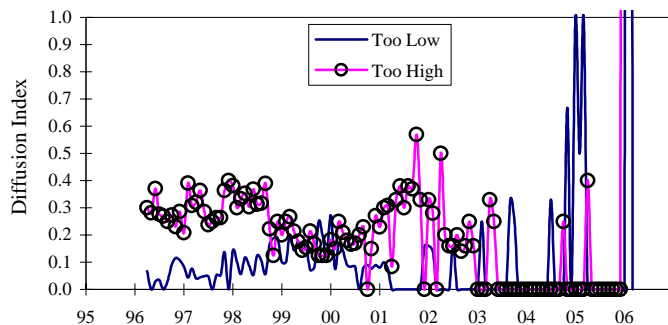


Finished Goods Inventory Relative to Use

The overall inventory level (units, not dollars) of products held for sale (finished goods) relative to expected use.

	March	Feb	Jan	Dec	Nov	Year ago March
Composite	83	50	67	50	50	0
% too high	0	0	0	0	0	0
Manufacturing	100	50	100	50	50	0
Non-Mfg.	75	50	50	50	50	NA

Finished Goods Inventory vs. Expected Use

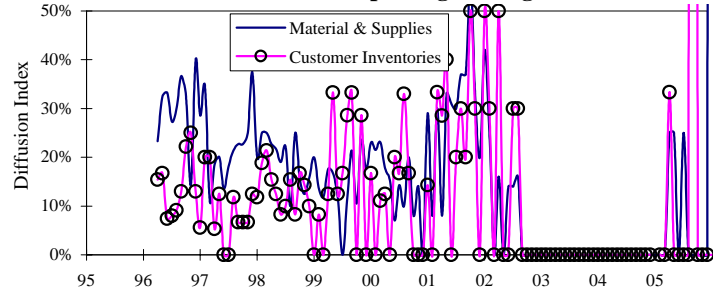


Raw Materials & Customer Inventory

The overall inventory level (units, not dollars) of products held for sale (finished goods) relative to expected use.

	Year ago					
	March	Feb	Jan	Dec	Nov	March
Materials & Supplies	0.0	0.0	0.0	0.0	0.0	0.0
Customer Inventories	0.0	0.0	0.0	0.0	0.0	0.0

Material & Customer Stocks vs. Expected Use % Reporting too High



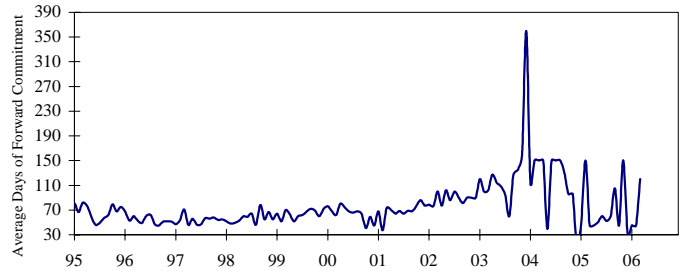
Buying Policy for Production Materials

The period of forward commitment for production materials.

	Year ago					
	March	Feb	Jan	Dec	Nov	March
Average Days	120	45	45	30	150	45

Weighted Average Number of Days	Hand to Mouth	30 Days	60 Days	90 Days	6 Months	1 Year or More
120	0%	20%	40%	20%	0%	20%

Production Materials



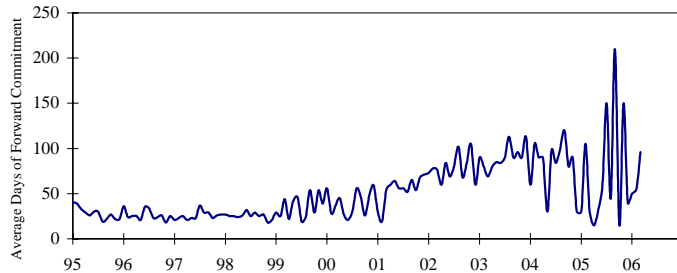
Buying Policy for MRO Supplies

The period of forward commitment for maintenance, repair, and operation supplies.

	Year ago					
	March	Feb	Jan	Dec	Nov	March
Average Days	96	55	45	15	96	30

Weighted Average Number of Days	Hand to Mouth	30 Days	60 Days	90 Days	6 Months	1 Year or More
96	40%	20%	0%	20%	0%	20%

MRO Supplies



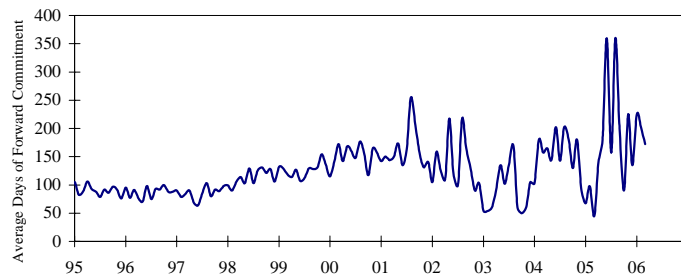
Buying Policy for Capital Expenditures

The period of forward commitment for capital goods.

	Year ago					
	March	Feb	Jan	Dec	Nov	March
Average Days	172.5	202.5	225	135	225	45

Weighted Average Number of Days	Hand to Mouth	30 Days	60 Days	90 Days	6 Months	1 Year or More
173	0%	0%	25%	25%	25%	25%

Capital Equipment



Specific Price Changes & Supplier Deliveries

--- PRICE CHANGES ---

--- VENDOR DELIVERIES ---

COMMODITIES

		March	Feb	Jan	March	Feb	Jan
Castings			100.0			100.0	
Chemicals			75.0			75.0	
Computer Hardware	+++	50.0	25.0		50.0	50.0	
Computer Software	+++	50.0	50.0		50.0	50.0	
Corrugated Packaging			75.0			50.0	
Electrical Components			50.0			100.0	
Energy			100.0			50.0	
Ferrous Metals			50.0				
Food Products			50.0				
Glass							
Hydraulic Components							
Medical Supplies							
Nonferrous Metals	+++						
Office Equipment (non-computer)	+++	50.0	50.0		50.0	50.0	
Office Supplies	+++	50.0	50.0		50.0	50.0	
Piping & Tubing			100.0			100.0	
Plastics			100.0			75.0	
Plating							
Printing Paper	+++	50.0	50.0	50.00	50.0	50.0	50.00
Rubber Products							
Textile Products							
Wood & Pulp			100.0			100.0	
Services (Contracted)					"Hot Spots" are those commodities & services that have experienced upward price pressure with delivery delays (for commodities) for at least three months. Where are the HOT SPOTS?		
Cleaning		60.0	60.00	60.00			
Construction		62.5	62.50	62.50			
Painting		62.5	62.50	62.50			
Engineering	+++	50.0	50.00	50.00			
Architectural	+++	62.5	62.50	62.50			
Temporary Personnel	+++	58.3	58.33	58.33			
Computer Consultants	+++	60.0	60.00	60.00			

+++ = Commodity or service price diffusion index above 50% for at least the last three months.

Items in Short Supply

Purchaser Comments

About the Survey

The purpose of the survey is to quickly assess business conditions among manufacturers and non-manufacturing firms/organizations doing business in the New York area. The survey results are compiled into three summary measures for: (1) all industries, (2) manufacturing firms, and (3) non-manufacturing establishments. The manufacturing component can be compared to the ISM Purchasing Manager's Index for the nation. The survey results are compiled as diffusion indexes, which are calculated by taking the percentage of the respondents answering higher plus one-half of the percentage of respondents who answer same or no change. Hence, a reading of 50% means no change from the prior month; greater than 50% indicates a faster pace of activity while a reading of less than 50% indicates a slowing in the pace of activity.



Welcome

Boston
PMI: 48.4
CONTRACTS



[Members Log In Here](#)



PMABoston/UMass Lowell Regional Survey of Business Conditions

Aloha

March 2006
Release Date: 1 April 2006

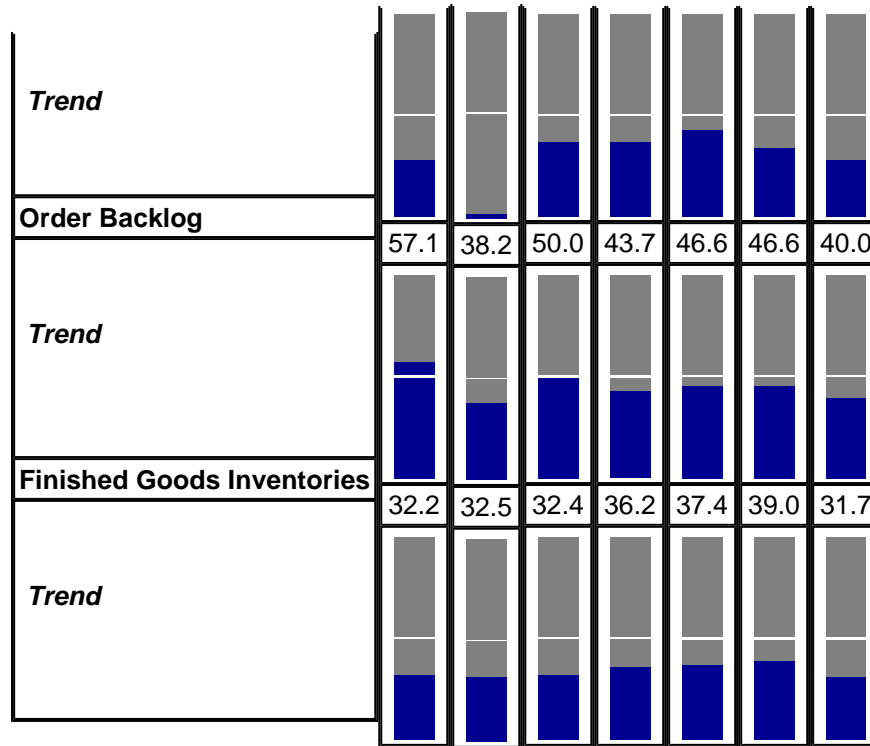
BOSTON REGION CONTRACTS
Purchasing Managers Index: 48.4
Business Confidence: 66.6

	Sep 2005	Oct 2005	Nov 2005	Dec 2005	Jan 2006	Feb 2006	Mar 2006
Boston Index	55.9	47.6	55.3	51.8	65.1	54.3	48.4
New Orders	66.3	53.2	61.4	62.0	70.0	63.9	58.7
Production	45.4	42.2	48.8	43.8	59.7	49.7	39.6
Employment	57.7	49.3	56.4	54.4	70.6	51.0	43.2
Supplier Deliveries	52.4	43.8	55.3	47.5	57.7	49.0	54.4
Raw Materials Inventory	53.6	47.3	51.9	42.8	64.7	52.0	41.2
Business Confidence	64.2	58.8	75.0	78.1	83.3	80.0	66.6
Commodity Prices	74.3	81.6	64.1	70.1	78.3	65.8	70.7
Product Prices	54.0	53.4	52.4	48.8	57.9	54.8	56.6
New Export Orders	28.5	0.3	37.2	37.2	43.3	34.1	28.6
Order Backlog	57.1	38.2	50.0	43.7	46.6	46.6	40.0
Finished Goods Inventories	32.2	32.5	32.4	36.2	37.4	39.0	31.7

Trend Analysis

	Sep 2005	Oct 2005	Nov 2005	Dec 2005	Jan 2006	Feb 2006	Mar 2006
Boston Index	55.9	47.6	55.3	51.8	65.1	54.3	48.4
<i>Trend</i>							
New Orders	66.3	53.2	61.4	62.0	70.0	63.9	58.7
<i>Trend</i>							

Production	45.4	42.2	48.8	43.8	59.7	49.7	39.6
<i>Trend</i>							
Employment	57.7	49.3	56.4	54.4	70.6	51.0	43.2
<i>Trend</i>							
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New Export Orders	28.5	0.3	37.2	37.2	43.3	34.1	28.6



This report is based on a survey of Purchasing Management Association of Boston members that queries whether a particular economic indicator is better, the same, or worse than the previous month. The response on each item is tabulated into a diffusion index that is calculated as the percent "better" plus one-half of the percent "same".

An index number over 50 signals expansion or an increase in that indicator. The Boston Index is composed of the weighted averages of five indicators (e.g., new orders 30%, production 25%, etc.) and should be thought of as a leading indicator.

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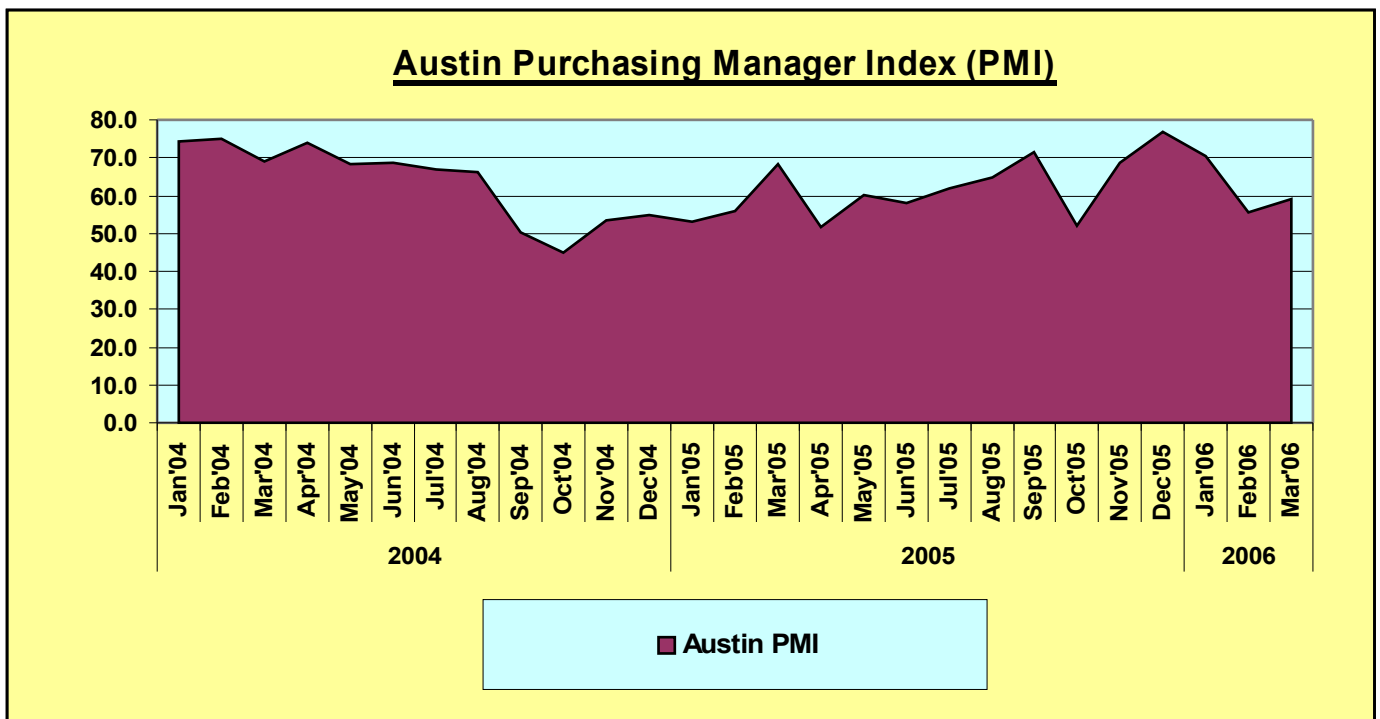
Arturo R. Zavala

artzavala@austinfoam.com

AUSTIN AREA
SUMMARY REPORT ON BUSINESS

March, 2006

<u>Region</u>	<u>Economy</u>	<u>Main Index</u>	<u>Comments</u>
Austin	Expanding	59.0	<p>The Austin Purchasing Managers Index continues in the Expanding mode and has improved from February by 6%.</p> <p>Indices that are EXPANDING and higher than February: Production, New Orders, Prices & Supplier Backlog. No month to month change for Employment.</p> <p>Indices that are EXPANDING but slower than February: Supplier Delivery.</p> <p>Indices that are DECREASING below 50: No month to month change for Inventory.</p>



AUSTIN AREA
REPORT ON BUSINESS
March, 2006

For Immediate Release: April 3, 2006

Contact:

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(512) 255-6458
artzavala@austinfoam.com

AUSTIN PURCHASING MANAGER'S INDEX FOR MARCH, 2006 CONTINUES IN THE EXPANDING MODE OVERALL @ 59.0 AND IMPROVED FROM FEBRUARY BY 6%. 5 INDICES EXPANDED FROM FEBRUARY: EMPLOYMENT, NEW ORDERS, PRICES & SUPPLIER BACKLOG. NO MONTH TO MONTH CHANGE FOR PRODUCTION. 1 INDEX SLOWER THAN FEBRUARY: SUPPLIER DELIVERY. INDEX BELOW 50: NO MONTH TO MONTH CHANGE FOR INVENTORY.

Key Indicators:

PMI Index changed from 55.5 to 59.0
Employment Index maintained at 56.5
Production Index changed from 63.0 to 65.5
New Orders changed from 47.0 to 66.0

The National Association of Purchasing Management, Austin Inc. (NAPM-Austin) has completed its March, 2006 "Report on Business" for Austin and surrounding area. This report is modeled on the widely watched "Report on Business" published by the Institute for Supply Management (ISM), NAPM Austin's parent organization.

Readings below 50 percent indicate that the overall economy is generally Contracting.
Readings above 50 percent indicate that the overall economy is generally Expanding.

Purchasing Manager's Index (PMI) – About the PMI

The PMI is a composite Index based on **diffusion** indices calculated for five different areas on which manufacturing & non-manufacturing Purchasing Agents are polled – New Orders, Production, Employment, Supplier Deliveries and Inventories.

Diffusion indices have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. They are calculated on a formula and are adjusted monthly on factors published by the U.S. Department of Commerce. The diffusion index for each area has different weights, relative to the importance attached to each factor.

NAPM Austin was chartered in 1971 as the Austin Purchasing Managers Association and currently has almost 300 members in the Austin area. NAPM Austin sponsors the monthly poll of Purchasing professionals in the Austin area and has been publishing a "Report on Business" for the Austin area for over 20 years. These Purchasing Agents are the primary buyers of manufacturing & non-manufacturing goods and services for their companies.

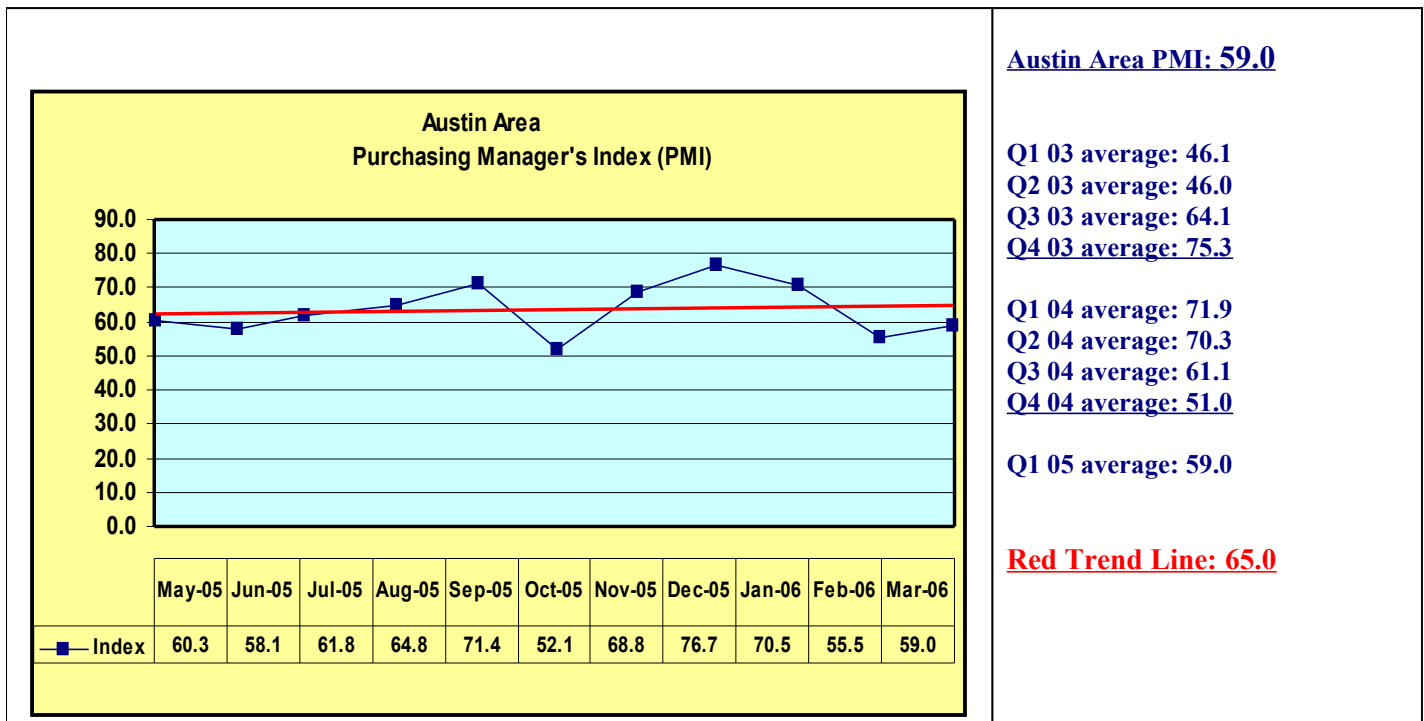
NAPM Austin is an affiliate of the Institute of Supply Management (ISM).

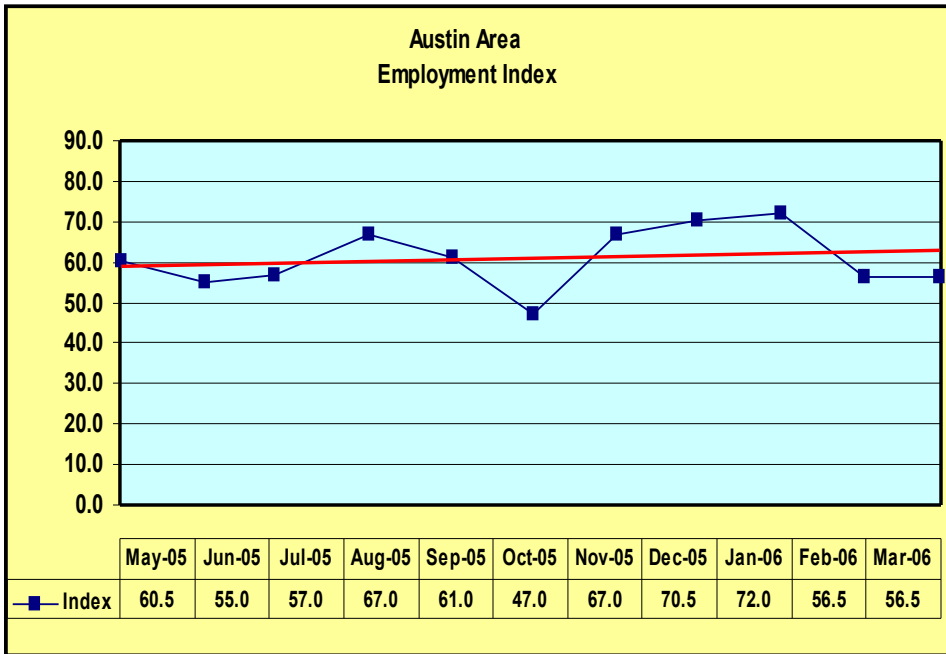
If you would like to participate in this important activity, please call Jan Pedigo at Tel: (512) 651-6238 or send an email to Shaun Bunting at bunting.shaun@athenamfg.com or fax him at 512-928-2741. Your participation in this survey poll will help interpret and reflect economic activity in the Austin area more accurately. This Report is compiled from aggregated data (to preserve the confidentiality of his sources) and is submitted by Shaun Bunting to Art Zavala.

An abbreviated version of this report is being published in the NAPM newsletter. The Charts for the other leading indicators (Employment, New Orders, Production, Inventory, Supplier Delivery and Prices) which constitute the balance of this "Report on Business" are available on the NAPM Austin's website, www.napm-austin.org.

SUMMARY - AT A GLANCE March, 2006

Index	May-05	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	Economic Direction
PMI	60.3	58.1	61.8	64.8	71.4	52.1	68.8	76.7	70.5	55.5	59.0	Expanding
Production	64.0	66.5	62.5	67.0	78.5	56.5	72.0	80.5	80.5	63.0	65.5	Expanding
New Orders	61.5	57.5	63.0	60.5	68.0	40.0	69.5	83.0	66.0	47.0	66.0	Expanding
Inventory	58.0	45.0	48.0	47.5	61.0	53.5	45.5	53.5	50.0	46.5	46.5	Contracting
Prices	63.5	61.5	56.5	72.0	78.5	73.5	69.5	60.5	72.0	63.0	69.0	Expanding
Employment	60.5	55.0	57.0	67.0	61.0	47.0	67.0	70.5	72.0	56.5	56.5	Expanding
Supplier Delivery	69.5	66.5	63.5	61.5	78.5	59.5	72.0	73.0	69.5	70.0	63.0	Expanding
Order Backlog	47.5	50.0	54.5	55.5	46.5	43.5	67.0	70.5	52.5	50.5	59.0	Expanding





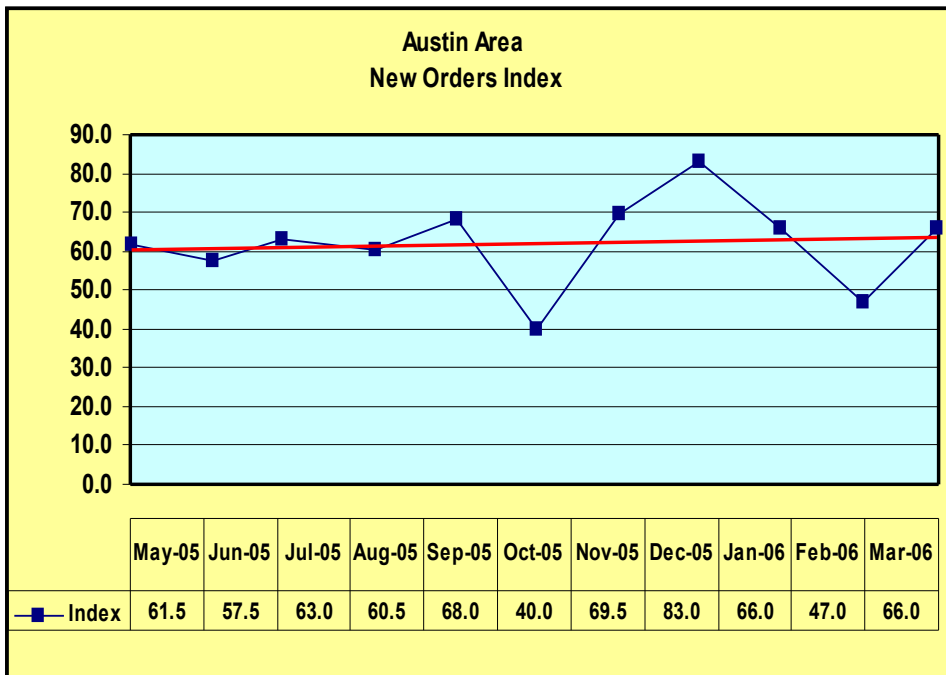
Austin area Employment Index:
56.5

Q1 03 average: 33.3
Q2 03 average: 39.8.
Q3 03 average: 56.0
Q4 03 average: 67.0

Q1 04 average: 73.0
Q2 04 average: 70.7
Q3 04 average: 54.5
Q3 04 average: 51.0

Q1 05 average: 61.3

Red Trend Line: 64.0



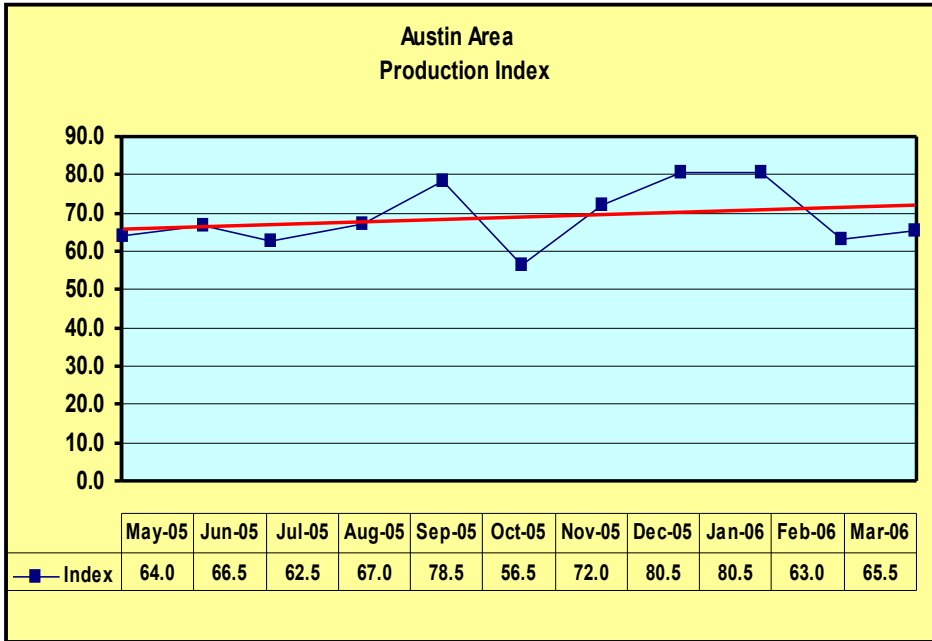
Austin area New Orders Index:
66.0

Q1 03 average: 52.5
Q2 03 average: 51.3
Q3 03 average: 72.2
Q4 03 average: 78.8

Q1 04 average: 74.0
Q2 04 average: 74.0
Q3 04 average: 63.2
Q4 04 average: 47.7

Q1 05 average: 62.5

Red Trend Line: 65.0



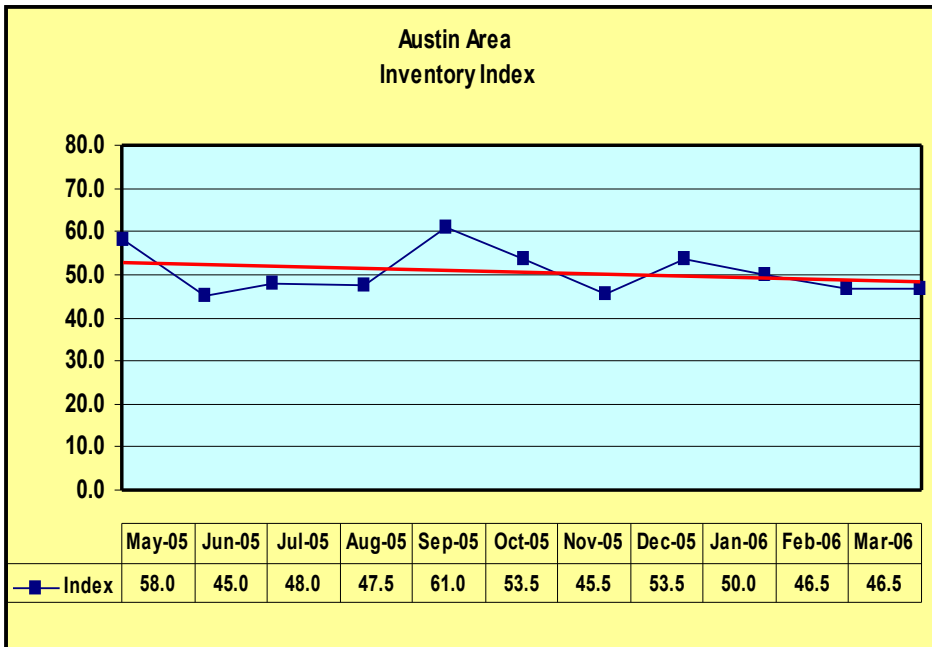
Austin area Production Index: 65.5

Q1 03 average: 52.4
 Q2 03 average: 49.3
 Q3 03 average: 74.0
 Q4 03 average: 75.5

Q1 04 average: 80.3
 Q2 04 average: 82.2
 Q3 04 average: 62.2
 Q4 04 average: 45.7

Q1 05 average: 61.3

Red Trend Line : 72.0



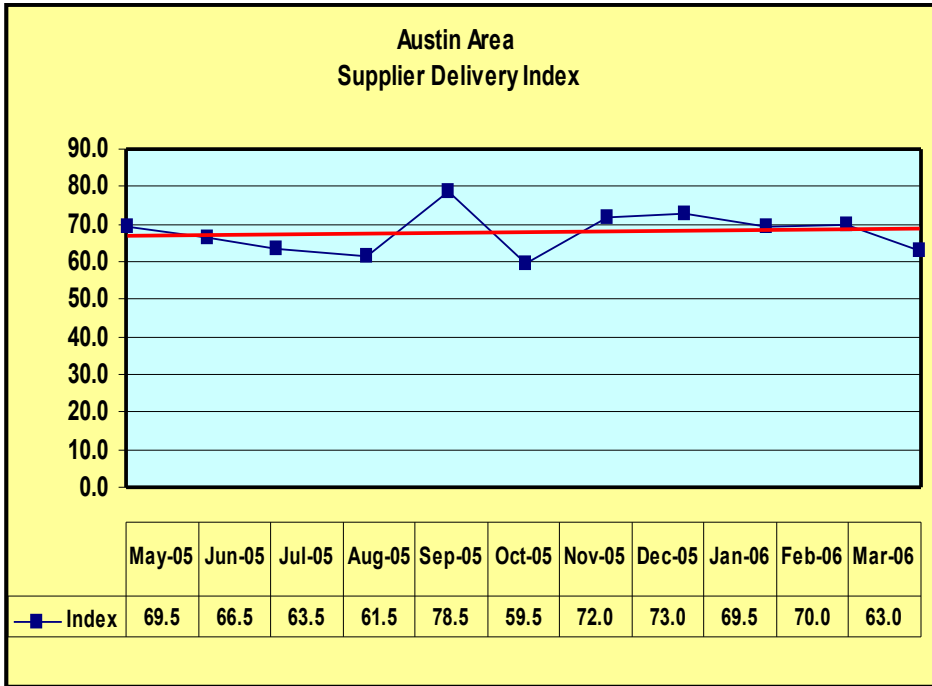
Austin area Inventory Index: 46.5

Q1 03 average: 31.2
 Q2 03 average: 34.1
 Q3 03 average: 39.0
 Q4 03 average: 40.8

Q1 04 average: 57.8
 Q2 04 average: 57.2
 Q3 04 average: 56.2
 Q4 04 average: 50.2

Q1 05 average: 53.5

Red Trend Line: 49.0



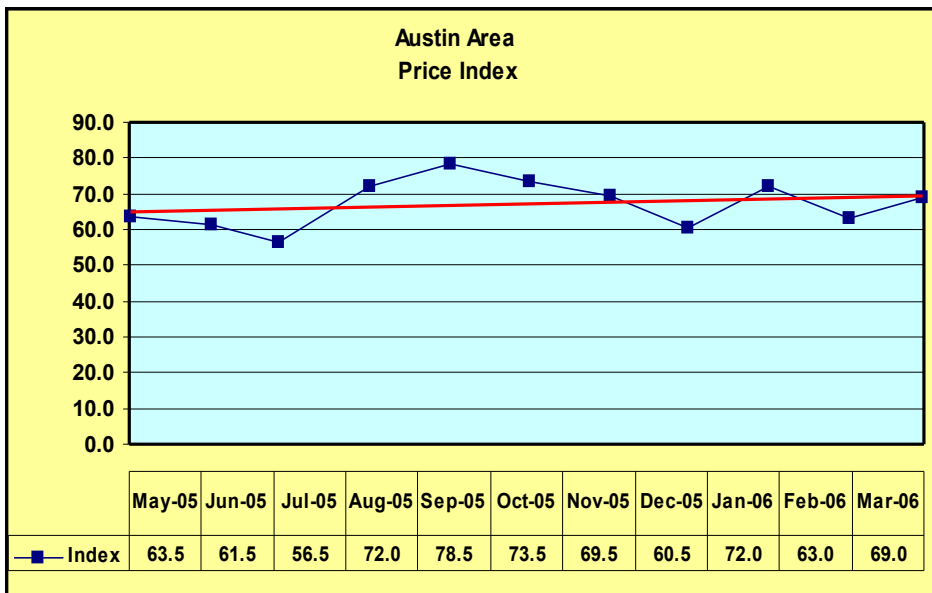
Austin area Supplier Delivery Index: 63.0

Q1 03 average: 49.9
Q2 03 average: 51.1
Q3 03 average: 56.7
Q4 03 average: 65.5

Q1 04 average: 70.0
Q2 04 average: 70.3
Q3 04 average: 58.8
Q4 04 average: 54.3

Q1 05 average: 57.5

Red Trend Line: 69.0



Austin area Price Index: 69.0

Q1 03 average: 51.7
Q2 03 average: 42.7
Q3 03 average: 54.7
Q4 03 average: 49.8

Q1 04 average: 68.7
Q2 04 average: 73.8
Q3 04 average: 71.0
Q4 04 average: 43.5

Q1 05 average: 67.7

Red Trend Line: 70.0