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**Working Paper**

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*Suggested Citation:* Petrevski, Goran (2023) : Determinants of Inflation Targeting: A Survey of Empirical Literature, ZBW - Leibniz Information Centre for Economics, Kiel, Hamburg

This Version is available at:

<https://hdl.handle.net/10419/271121>

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## **Determinants of Inflation Targeting: A Survey of Empirical Literature**

### **Abstract**

This paper surveys the empirical literature of dealing with the choice of inflation targeting (IT). Specifically, the paper focuses on the main institutional, macroeconomic, and technical determinants affecting the adoption of IT. The main findings from our review are the following: there is strong empirical evidence that larger and more developed countries are more likely to adopt the IT regime; similarly, the introduction of IT regime is conditional on previous disinflation, greater exchange rate flexibility, central bank independence, and higher level of financial development; however, the literature suggests that the link between various macroeconomic and institutional determinants and the likelihood of adopting IT may be rather weak, i.e., they are not to be viewed either as strict necessary or sufficient conditions.

Keywords: inflation targeting, monetary policy, inflation, emerging markets economies.

JEL classification codes: E42, E52, E58

### **1. Introduction**

In 1990, New Zealand adopted IT as a new framework for conducting monetary policy, followed by Canada (1991), United Kingdom (1992), and several other industrialized countries. Since then, this monetary policy regime has gained increasing popularity in both advanced countries and EMEs. As a result, by 2019, in one form or another, IT has been implemented in 43 countries as

diverse as Albania, Ghana, Mexico, Russia, South Africa, Sweden, and UK (IMF, 2020). Commenting on the global popularity of IT, Rose (2007) claims that the international monetary system has been dominated by inflation targeters. Also, IT is the longest-lasting monetary strategy after the World War II. In addition, unlike the other monetary strategies, IT has proved to be durable as no country has left it, yet. Therefore, according to Walsh (2009), the actual experience with IT unambiguously shows that it is both feasible and sustainable.

Table 1 in the Appendix presents the IT adoption dates for selected industrialized countries and EMEs. As can be seen, in several cases it is quite difficult to specify the exact date of adopting the IT regime, mainly due to the variations in its practical implementation. For instance, Chile introduced IT in 1990-1991, while retaining its exchange rate band by August 1999, when it switched to full-fledged IT; similarly, Israel adopted explicit inflation target in 1992, but retained the exchange rate band through 1997; Mexico, too, introduced some elements of IT in 1999 though it had not moved to the full-fledged variant until 2002. In these regards, not only the adoption dates differ among the individual empirical studies, but there are also discrepancies between the dates that can be found in the empirical literature and those specified on the central bank's web sites and in the official documents.

According to Bernanke and Mishkin (1997), Hammond (2012), Mishkin (2000), and Mishkin and Posen (1997), the main features of IT are the following: strong institutional commitment to price stability as the primary monetary policy objective in the medium-to-long run; the announcements of explicit numerical inflation targets for medium-term inflation; short-term flexibility, which allows the policy makers to respond to short-term disturbances from various sources (supply shocks, exchange rate changes, etc.); as well as high degree of central bank independence, accountability, and transparency. As for the practical implementation of monetary policy, a distinctive feature of IT is the absence of intermediate targets, which stands in sharp contrast to the alternative monetary policy strategies, such as monetary or exchange rate targeting. In these regards, Bernanke and Mishkin (1997) describes IT as a “rule-like strategy” or “constrained discretion”, which enables the central bank to be focused on price stability while at the same time being able to deal with short-run macroeconomic fluctuations.

Consequently, IT is supposed to provide the following advantages in comparison with other monetary policy regimes: it builds discipline, credibility and accountability of central banks by preventing policy makers to engage in systematic short-term stimuli, and by subjecting the central

bank's short-run actions to public scrutiny and debate about their long-term consequences; it improves central bank's communication with the general public; it is both efficient and forward-looking strategy as it use all the available information along with an explicit account of time-lags; it helps the central bank to anchor inflation expectations and to cope with adverse supply shocks, which results in lower economic costs (Batini and Laxton 2007, Bernanke and Mishkin 1997, Mishkin 2000). Similarly, Mishkin and Schmidt-Hebbel (2002) argue that IT offers several benefits for EMEs, such as reinforcing central bank independence and enabling central banks to be more focused on inflation. In addition, Thornton and Vasilakis (2017) show that IT facilitates the implementation of countercyclical monetary policy in these countries, majority of which have been previously notorious for implementing procyclical policies.

The proponents of IT often emphasize its flexibility as a crucial property in the practical implementation of monetary policy (Mishkin 1999 and 2004a). On the one hand, the firm focus on price stability increases the credibility of central banks with its favourable effects on inflation expectations. On the other hand, central banks typically approach the inflation target gradually over time, thus, retaining the manoeuvre room for responding to possible adverse short-run circumstances. In other words, within this policy framework, central banks can combine the inflation targets with other policy goals such as output or employment (Agénor 2002, Leiderman and Svensson 1995, Svensson 1997a). In this way, flexible IT appears to be an optimal monetary policy leading to lower average inflation accompanied by output stabilization (Ball 1999a and 1999b, Clarida et al. 1999, Svensson 1997b).

On the other hand, IT has been criticized on various grounds: a) it is too rigid by constraining discretion in monetary policy, thus, unnecessarily restraining growth; b) it cannot anchor inflation expectations because it offers too much discretion with respect to both the definition and maintenance of inflation targets; c) relatively frequent misses of inflation targets, due to the imperfect control of inflation and the long lags in the monetary transmission mechanism, can lead to weak central bank credibility; d) it may not be sufficient to ensure fiscal discipline or prevent fiscal dominance; e) the exchange rate flexibility required by IT might cause financial instability; and f) its practical implementation is dependent on a number of institutional and technical preconditions, which are not met in the most of EMEs (Batini and Laxton 2007, Bernanke et al. 1999, Mishkin 1999 and 2000). The last four disadvantages are especially relevant for EMEs.

IT has been implemented in EMEs within specific macroeconomic and institutional environment, which undoubtedly affects the implementation of effective monetary policy. For instance, most of these countries are characterised by fiscal dominance and weak banking systems, which are not consistent with a sustainable IT regime. Also, as the long history of high inflation undermines the central banks' credibility, the introduction of IT should be preceded by, at least partial, disinflation. Finally, simultaneously with inflation targets, central banks in EMEs should take care for smoothing excessive exchange rate fluctuations for at least two reasons: the exchange rate channel is of crucial importance in small open economies; both dollarization and the exposure of sudden stops of foreign capital amplifies the vulnerability of firms and banks to exchange rate fluctuations, which may lead to full-blown financial crisis. Hence, central banks in EMEs must be concerned with exchange rate fluctuations, thus preventing sharp depreciations that might cause high inflation and financial instability. Yet, putting too much emphasis on the exchange rates might create confusion in the public, thus, compromising the credibility of inflation targets. Therefore, the practical implementation of IT in EMEs can be quite complicated: on the one hand, central banks should smooth exchange rate fluctuations, but on the other hand, they cannot allow the inflation targets to be subordinated to exchange rate policy. Given these unfavourable macroeconomic and institutional conditions prevailing in EMEs, IT need not necessarily provide the outcomes that are either *a priori* expected in theory or observed in advanced economies. At the same time, as suggested by Walsh (2009), the larger variation in inflation experiences in EMEs may help identify the true effects of IT. Consequently, a large body of empirical evidence on the macroeconomic effects of IT has focused on EMEs.

This main goal of this article is to survey and to synthesize the main findings in the empirical literature on the determinants of IT. Specifically, the paper focuses on the main institutional, macroeconomic, and technical determinants affecting the adoption of IT (especially in EMEs). Despite the accumulated empirical literature in this field, it is quite surprising to observe the lack of comprehensive and well-structured review of it. Hence, we believe that our paper provides a valuable contribution in filling this void.). The main findings from our review are the following: there is robust empirical evidence that larger and more developed countries are more likely to adopt the IT regime; similarly, the introduction of IT is conditional on previous disinflation, greater exchange rate flexibility, central bank independence, and higher level of financial development; however, the literature suggests that the link between various

macroeconomic and institutional determinants and the likelihood of adopting IT may be rather weak, i.e., they are not to be viewed either as strict necessary or sufficient conditions.

The rest of the paper is structured as follows: in Section 2 we provide a brief discussion on the choice of IT; Section 3 reviews the main findings from the empirical literature with a special focus on EMEs; and Section 4 summarizes the main conclusions.

## **2. The choice of IT**

Although an increasing number of countries have adopted IT during the past two decades, many more of them, especially the EMEs, still rely on other strategies for controlling inflation. This naturally raises the question of which factors determine the choice of IT vis-a-vis alternative monetary policy regimes. In principle, this choice should be based on both theoretic grounds and empirical evidence. Theoretically, the choice of optimal monetary policy has been analysed within a well specified (usually, a small-scale) macroeconomic model by comparing the central bank's loss function under alternative policy rules. Here, a number of papers demonstrate that IT outperforms the alternative monetary policy rules in terms of inflation/output variability (Ball 1999a, 1999b, Haldane and Batini 1999, Rudebusch and Svensson 1999, Svensson 1999a, 1999b, 2000). At the same time, despite the accumulated empirical evidence on the macroeconomic effects of IT, the findings from these studies are rather inconclusive: while some papers suggest that IT is associated with lower average inflation and improved inflation/output variability (Arsić et al. 2022, Batini and Laxton 2007, Calderón and Schmidt-Hebbel 2010, Combes et al. 2014, Mukherjee and Singer 2008, Ouyang and Rajan 2016, Vega and Winkelried 2005, Wu 2004), others show that it does not produce superior macroeconomic benefits or, at most, they are quite modest (Angeriz and Arestis 2007, Ardakani et al. 2018, Arestis et al. 2014, Ball and Sheridan 2004, Dueker and Fischer 2006, Lin and Ye 2007, Neumann and von Hagen 2002, Stojanovikj and Petrevski 2021, Wang 2016, Willard 2012). Therefore, the increasing adoption of IT is not based on strong empirical evidence with respect to the macroeconomic performance of this monetary regime. In addition, it should be noted that the experience of advanced countries may not be relevant for EMEs due to their specific institutional and macroeconomic characteristics.

The early literature has suggested that the adoption of IT requires the fulfilment of several economic, institutional and technical prerequisites, such as: the absence of fiscal dominance,

strong external position, relatively low inflation, well-developed financial markets and sound financial system, central bank independence, some structural characteristics (price deregulation, low dollarization, low sensitivity to supply shocks, strong external position etc.), the absence of de facto exchange rate targets, well developed technical infrastructure for forecasting inflation etc. (Agénor 2002, Amato and Gerlach 2002, Battini and Laxton 2007, Carare et al. 2002, Carare and Stone 2006, Eichengreen et al. 1999, Freedman and Ötoker-Robe 2009 and 2010, IMF 2006, Masson et al. 1997, Mishkin 2000, Mishkin and Savastano 2002, Mishkin and Schmidt-Hebbel 2002, Mishkin and Schmidt-Hebbel 2007).

While theoretically sound, the experience shows that many inflation targeters, especially the EMEs, have not met all these requirements, at least in the initial phase. Indeed, EMEs operate in a specific institutional and macroeconomic environment, which often complicates the design and implementation of the IT regime. For instance, the presence of fiscal dominance, a common feature in many EMEs, undermines the effectiveness of monetary policy. Similarly, weak banking systems in these countries often precludes the use of market-based monetary policy instruments. Further on, the long historical experience with high inflation reduces the credibility of their central banks, requiring at least partial disinflation before the introduction of IT. Also, given the crucial importance of the exchange rate channel in small open economies, the central banks in EMEs must be concerned with both exchange rate fluctuations and inflation targets simultaneously. Finally, central banks in many EMEs often lack the necessary technical infrastructure (data availability, lack of systematic forecasting process, low understanding of the transmission mechanism etc.), which hampers the day-to-day implementation of IT (Amato and Gerlach 2002, Jonas and Mishkin 2007, Mishkin 2000, Mishkin 2004b, Mishkin and Savastano 2002, Mishkin and Schmidt-Hebbel 2002).

In this regard, based on a survey of 31 central banks, Battini and Laxton (2007) assess whether some preconditions must be met before adopting IT in EMEs, such as: technical infrastructure, financial system, institutional central bank independence, and economic structure. They construct an extensive list of parameters and, by quantifying each of them, conclude that EMEs had not satisfied these required preconditions, which implies that adopting IT does not depend on meeting some strict initial pre-conditions. Similarly, based on the experience with the introduction and implementation of IT, Freedman and Ötoker-Robe (2009) and Schmidt-Hebbel and Carrasco (2016) argue that a country must meet some basic preconditions before adopting IT,

though most of the countries failed to meet all the preconditions. More importantly, they show that the adoption of IT itself promotes the fulfilment of these preconditions. Samarina and Sturm (2014) provide a strong empirical support to this hypothesis by showing that there is a structural change after the adoption of IT, implying that, even when a country does not meet all the preconditions, once it has adopted IT, this decision leads to changes in the institutions which support its proper functioning.

### **3. The empirical literature on adopting IT**

The empirical literature on the determinants behind the adoption of IT generally follows an eclectic approach by specifying a general list of determinants that are expected to affect the choice of IT. In other words, only a few studies focus on the role of specific factors (e.g., political). Consequently, this approach prevents us to provide a structured survey of this strand of literature. In addition to the empirical studies investigating explicitly the determinants of IT, there are number of papers which, although having different research topic, deal with issue as part of the overall empirical approach. Here, we refer to the papers employing the propensity score matching methodology or other similar types of treatment effects regression. Within this framework, in the first stage of the empirical investigation the dummy variable of adopting IT is usually regressed on several macroeconomic variables. The non-exhaustive list of this research includes Ardakani et al. (2018), Arsić et al. (2022), de Mendonça and de Guimarães e Souza (2012), Fry-McKibbin and Wang (2014), Gonçalves and Carvalho (2009), Lin (2010), Lin and Ye (2007, 2009), Lucotte (2012), Minea and Tapsoba (2014), Minea et al. (2021), Mukherjee and Singer (2008), Pontines (2013), Samarina et al. (2014), Vega and Winkelried (2005), and Yamada (2013).

In what follows we first provide a brief explanation of the expected impact of the above-mentioned determinants on the likelihood of adopting IT along with an overview of the main findings from the empirical research in this field. Table 2A in the Appendix provides detailed description of individual studies, while Table 2B summarizes the main empirical findings by each determinant.

Besides the well-known argument that small open economies are the most serious candidates for pegged exchange rates, *a priori*, it is difficult to say whether IT is a “one-size-fits-all” strategy which is appropriate for both large and small economies. At the same time, the



experience reveals that IT has been implemented in a wide array of countries, ranging from very small (Albania, Israel, Serbia etc.) to very large countries (Brazil, India, Russia, and South Africa). Most of the empirical studies confirm that size matters for the adoption of IT by showing that the size of the economy, measured either by the level of GDP or GDP per capita, is associated with higher likelihood of adopting this monetary regime (de Mendonça and de Guimarães e Souza 2012, Leyva 2008, Lucotte 2010, Minea et al. 2021, Samarina et al. 2014, Yamada 2013). Yet, since GDP per capita is used as a general proxy for the level of economic development, some of these results imply that not larger but more developed economies are more likely to adopt IT. In a similar fashion, several studies obtain the same findings working with either area or population size (Arsić et al. 2022, Rose 2014, Wang 2016, Yamada 2013). However, this conclusion is not shared by Hu (2006) and Ismailov et al. (2016), while some papers suggest that the importance of this determinants may be sensitive to the sample. For instance, Carare and Stone (2006) and Fouejieu (2017) are not able to confirm this hypothesis for the sample of EMEs, while Samarina et al. (2014) provide similar evidence for the advanced economies.

Usually, central banks tend to choose their monetary strategy in response to past macroeconomic performance. In theory, inflation and output are the standard elements in the central bank's loss function. In practice, although inflation control is the primary goal of monetary policy, central banks often pay attention to economic activity, too. In this regard, if a country has experienced unsatisfactory economic performance, such as low growth rates or high output volatility, then the central bank might consider switching to IT as a strategy which enables policy makers to focus on the developments in the real economy, too. This argument may be especially relevant for EMEs, which traditionally have worse performance than advanced economies due to the unfavourable macroeconomic environment prevailing in them (Fraga et al. 2003). The empirical literature offers mixed evidence on the effects of economic performance on the choice of IT. For instance, Lucotte (2012) finds that higher output growth increases the likelihood to adopt IT. On the other hand, a few papers find a negative association between GDP growth and the probability of adopting IT, implying that the countries experiencing satisfactory economic performance have less incentives to switch to this regime (Ardakani et al. 2018, Hu 2006). In fact, most of the empirical research has produced either statistically insignificant or non-robust results about the importance of output growth for the choice of IT (Fouejieu 2017, Lin 2010, Lin and Ye 2007 and 2009, Pontines 2013, Samarina and De Haan 2014, Thornton and Vasilakis 2017, Wang

2016). Similarly, the empirical literature does not provide an unambiguous answer to the question of whether the countries facing more (less) stable economic conditions (measured by output volatility) are good (bad) candidates to implement IT. Mukherjee and Singer (2008) as well as Samarina and De Haan (2014) show that higher output volatility makes adopting IT more likely, Hu (2006) finds that this factor is statistically insignificant, while Samarina and Sturm (2014) and Stojanovikj and Petrevski (2019) obtain opposite findings, finding that provide some evidence that macroeconomic instability reduces the likelihood of adopting IT.

Similarly, the central bank might choose its monetary policy strategy based on its experience with past inflation rate. Here, the literature suggests that the introduction of IT is not feasible at high inflation rates, when there is a considerable degree of inertia in nominal variables, and monetary policy is largely accommodative. Therefore, a country should first reduce inflation to a relatively low level before it adopts this monetary regime (Carare et al. 2002, Masson et al. 1997, Mishkin 2000). Accordingly, this argument implies that higher inflation rates make the introduction of IT less likely. The empirical research provides strong support to this proposition for both industrialized countries and EMEs (Ardakani et al. 2018, Arsić et al. 2022, Hu 2006, Lin 2010, Lin and Ye 2007, Lin and Ye 2009, Minea and Tapsoba 2014, Minea et al. 2021, Pontines 2013, Samarina and Sturm 2014, Thornton and Vasilakis 2017). Yet, it is fair to note that the empirical evidence is not unanimous: Gonçalves and Carvalho (2009) and Vega and Winkelried (2005) obtain opposite findings, while the results in Fry-McKibbin and Wang (2014), Samarina and De Haan (2014), Samarina et al. (2014), and Wang (2016) are either insignificant or sensitive to the sample they work with (industrialized countries versus EMEs). Given the consensus view of inflation as a monetary phenomenon in the long-run, several studies test the relationship between money growth and the probability of adopting IT. It seems that this consensus prevails in the empirical literature, too (Ardakani et al. 2018, Arsić et al. 2022, Lin 2010, Lin and Ye 2007, Lin and Ye 2009, Pontines 2013, Samarina et al. 2014, Yamada 2013), with only a few exceptions (Fry-McKibbin and Wang 2014, Wang 2016). Therefore, it is safe to say that the countries experiencing higher past inflation or, equivalently, higher money growth, are less likely to switch to IT.

Strong external position, too, is expected to make the adoption of IT more likely. Within this monetary regime, the central bank should be focused on achieving and maintaining the inflation targets, which is only possible if the concerns for the balance payment and the exchange

rate are subordinated to the primary objective of monetary policy (Carare et al. 2002). However, the available empirical literature provides ambiguous findings on the importance of external macroeconomic conditions for the adoption of IT. For instance, Arsić et al. (2022) show that strong current account position reduces the likelihood of adopting IT, Mukherjee and Singer (2008) obtain opposite findings, while this variable is not significant in Hu (2006). The evidence on the role of external debt is equally inconclusive: Hu (2006) finds that higher external debt reduces the probability of adopting IT, while this factor is not significant in Samarina and De Haan (2014). Working with a sample of EMEs, Yamada (2013) finds that foreign exchange reserve, too, is not a significant factor when switching to IT. Similarly, Ardakani et al. (2018) obtain opposite results on the importance of central bank's assets: while their size makes the adoption of IT more likely in the advanced countries, it is quite contrary for the case of developing countries. In fact, all this evidence suggests that, although strong external position may make the transition toward IT easier, the developing countries characterized by favorable current account balance and/or sizable foreign exchange reserves have less incentives to change their existing monetary regimes (usually, some variant of a currency peg).

In addition, fiscal discipline is often listed as one of the basic requirements for adopting IT. In the presence of persistent high fiscal deficits, the central bank may be pursue accommodative monetary policy, which clearly undermines its ability to meet the announced inflation targets. Similarly, a high level of public debt may provide an incentive for the government to reduce the real value of the debt by high inflation (Mishkin 2000). As a result, fiscal discipline, and sound public finance in general (efficient tax-collection procedures, high government revenue, low budget deficits, and low public debt), are expected to increase the likelihood of adopting IT. However, the empirical evidence on the role of fiscal discipline is rather mixed, and this is equally true for the importance of both the budget balance and the public debt. As for the role of budget balance, only a few studies support the above proposition (Hu 2006, Lin 2010), while the majority of the empirical research either rejects it (de Mendonça and de Guimarães e Souza 2012, Pontines 2013) or provides inconclusive evidence (Carare and Stone 2006, Leyva 2008, Lin and Ye 2007, Mishkin and Schmidt-Hebbel 2002, Samarina and De Haan 2014, Vega and Winkelried 2005). The empirical literature is equally inconclusive when employing government debt as a fiscal policy indicator. Here, only a few studies show that higher indebtedness reduces the probability of adopting IT (Gonçalves and Carvalho 2009, Minea and Tapsoba 2014, Thornton and Vasilakis

2017), while others obtain either opposite findings (Arsić et al. 2022) or provide mixed evidence (Carare and Stone 2006, Ismailov et al. 2016, Lin and Ye 2009, Samarina and De Haan 2014, Samarina and Sturm 2014, Samarina et al. 2014, Wang 2016). Therefore, the empirical evidence implies that the role of fiscal discipline in choosing IT may be conditional on other factors, such as a country's history with inflation, the government's access to financial markets, central bank independence, the limits on central bank lending to the government etc. For instance, in countries with a long history of low inflation and with broad markets for government debt, the credibility of IT is less dependent on the government's actual fiscal position. Also, central bank independence accompanied by clear limits on central bank lending to the government diminish the role of fiscal discipline in the decision-process (Carare et al. 2002). Therefore, the inconclusive evidence on the role of fiscal discipline for adopting IT may not be surprising for the case of industrialized countries, which are characterized by long history of low inflation, broad and deep markets for government debt, and strong institutional environment. However, the lack of firm evidence is puzzling for the case of developing countries despite their long record of fiscal dominance, high inflation, and low central bank credibility.

Both trade and financial openness of the economy are also considered relevant factors for the choice of monetary policy strategy. For instance, many EMEs are traditionally exposed to large and persistent exogenous shocks, which makes them very sensitive to commodity prices and exchange rate fluctuations (Fraga et al. 2003). Consequently, small open economies tend to choose currency pegs as a preferred monetary regime, thus, being less likely to switch to IT (IMF 2006, Rose 2014). As for the importance of trade openness, the empirical literature seems to be completely divided about the importance of this factor: while a few studies find that trade openness is associated with higher probability of adopting IT (Leyva 2008, Lucotte 2010, Mishkin and Schmidt-Hebbel 2002), the majority of empirical research fails to support this proposition (Arsić et al. 2022, de Mendonça and de Guimarães e Souza 2012, Fouejieu 2017, Fry-McKibbin and Wang 2014, Hu 2006, Lucotte 2012, Lin 2010, Lin and Ye 2007, Lin and Ye 2009, Minea et al. 2021, Minea and Tapsoba 2014, Rose 2014, Samarina and De Haan 2014, Samarina et al. 2014, Thornton and Vasilakis 2017, Vega and Winkelried 2005), and this is true for both advanced economies and EMEs. On the other hand, most of the empirical suggests that financial openness is an important precondition for adopting IT (de Mendonça and de Guimarães e Souza 2012,

Samarina et al. 2014, Thornton and Vasilakis 2017) though a few studies refute this conclusion (Rose 2014, Samarina and De Haan 2014, Samarina et al. 2014).

Within the IT framework, price stability is the primary objective of monetary policy with other objectives (employment, exchange rate, external position) being subordinated to the inflation target. Therefore, by definition, IT requires flexible exchange rates, i.e., it is inconsistent with fixed exchange rate regimes. In other words, the presence of fixed exchange rates is expected to decrease the likelihood of adopting IT, while greater exchange rate flexibility works in the opposite direction. Indeed, the available empirical literature unanimously confirm that fixed exchange rates are not conducive to IT (Ardakani et al. 2018, Arsić et al. 2022, de Mendonça and de Guimarães e Souza 2012, Fouejieu 2017, Fry-McKibbin and Wang 2014, Lin 2010, Lin and Ye 2007, Lin and Ye 2009, Minea and Tapsoba 2014). Similarly, with a few exceptions (Hu 2006, Samarina and Sturm 2014), the large majority of empirical research finds that exchange rate flexibility makes the adoption of IT more likely (Ismailov et al. 2016, Lucotte 2010, Lucotte 2012, Minea et al. 2021, Mukherjee and Singer 2008, Pontines 2013, Samarina and De Haan 2014, Samarina et al. 2014, Thornton and Vasilakis 2017, Vega and Winkelried 2005). Therefore, we can conclude that there is a strong consensus that IT requires higher degree of exchange rate flexibility, i.e., currency pegs are not compatible with this monetary regime.

Undoubtedly, central bank independence appears to be one of the most important institutional factors necessary for successful implementation of IT. It is also understood that the central bank should have a clear mandate to pursue price stability with all the other objectives being subordinated to the inflation target (Agénor 2002). It seems that this proposition has found a widespread empirical support (Fouejieu 2017, Lin and Ye 2007, Lucotte 2010 and 2012, Minea and Tapsoba 2014) with only a few dissenting studies (Hu 2006, Lin and Ye 2009). Here, the literature refers to the so-called instrument independence, i.e., the autonomy of central bank in choosing its instruments to achieve the inflation targets. In one of the first attempts to address the factors behind the choice of IT, Mishkin and Schmidt-Hebbel (2002), who conduct a cross-section analysis on a sample of 27 advanced countries and EMEs during 1990s. The main findings from their study indicate that it is the type of central bank independence that matters for the choice of IT. Specifically, they find that legal central bank independence is not significant in the choice of IT. In addition, they show that the likelihood of adopting IT is positively associated with instrument independence, but goal independence has the opposite impact. Samarina and De Haan

(2014), too, confirm the importance of instrument independence for the sample of developing countries, but they find that this type of central bank independence is not significant for advanced economies. Carare and Stone (2006) investigate one particular dimension of central bank independence – restrictions on government lending and find that it is important only for the EMEs. Finally, Mukherjee and Singer (2008) show that central banks with a clear focus on price stability, i.e., those without bank regulatory authority, are more likely to choose IT.

Financial development and financial stability facilitate the adoption of IT in many ways. A well-developed financial system not only enables the central bank to employ market-based instruments, but it has a central role in the monetary policy transmission mechanism. Also, operating in a sound financial system, the central bank is free from the responsibility to inject liquidity to the failing financial institutions, so that it can focus on the achievement of the announced inflation target (Battini and Laxton 2007, Carare et al. 2002). The available empirical evidence generally supports the proposition that higher level of financial development is required for introducing IT (Carare and Stone 2006, de Mendonça and de Guimarães e Souza 2012, Leyva 2008, Samarina and Sturm 2014, Samarina et al. 2014, Thornton and Vasilakis 2017, Vega and Winkelried 2005) although it is fair to say that the empirical support is far from unanimous (Ardakani et al. 2018, Hu 2006, Lucotte 2010, Lucotte 2012, Samarina and De Haan 2014). On the other hand, Samarina and De Haan 2014 find that financial structure (market-based versus bank-based financial systems) does not matter for adopting IT. Also, the empirical literature fails to provide a clear conclusion on the importance of financial (in)stability: Samarina and De Haan (2014) find that the financial crisis dummy is statistically insignificant, while Thornton and Vasilakis (2017) provide some weak evidence that this factor matters in developing countries only.

Further on, several studies focus on the importance of political institutions for the adoption of IT. For instance, comparing IT with exchange rate pegs for a large set of more than 170 countries, Rose (2014) show that IT is a preferred monetary regime for the countries with more developed democratic institutions. Mukherjee and Singer (2008) show that countries are more likely to adopt IT when the government and the central bank share the same preferences for tight monetary policy. Specifically, the combination of a right-leaning government and a central bank without bank regulatory authority is likely to be associated with the adoption of IT. Ismailov et al. (2016) find that political stability does not affect the choice of IT for both low-income and high-income countries. Lucotte (2010 and 2012) investigates the role of institutional and political

factors in adopting IT for a sample of 30 EMEs. His findings imply that a number of political determinants increase the likelihood of adopting IT, such as the number of veto players in the political system, political stability as well as federalism (decentralization). In a similar fashion, working with a sample of 53 developing countries, Minea et al. (2021) obtain some other interesting results: on the one hand, they find that better institutional quality reduce the likelihood to switch to IT, while on the other hand, constraints on the executive makes the introduction of IT more likely. In this respect, the former finding seems to be at odds to their theoretical model linking the monetary regime, quality of institutions, and the sources of government finance, while the latter result conforms well to the predictions from the theoretical model.

Finally, there are some technical prerequisites for successful implementation of IT. For instance, the central bank should have a clear understanding of the time lag and the transmission mechanism; it should have long and reliable database and technical expertise to forecast inflation; it should conduct regular surveys of inflation expectations; and it should be able to develop market-based and forward-looking operating procedures. However, it is suggested that the initial technical conditions, although important, are not critical for introducing IT, i.e., the lack of these conditions can be remedied after the introduction of this monetary regime (Battini and Laxton 2007, and Carare et al. 2002, IMF 2006, Mishkin and Schmidt-Hebbel 2007).

Unsurprisingly, the empirical research has not led to firm conclusions on the importance of each individual determinant for the adoption of IT reflecting the fact that developed countries and EMEs represent a heterogeneous group with different institutional and macroeconomic characteristics. Indeed, several studies show that the determinants of the choice of IT generally differ between advanced economies and EMEs. For instance, Ardakani et al. (2018), Fry-McKibbin and Wang (2014), Ismailov et al. (2016), Samarina and De Haan (2014), Samarina et al. (2014), and Thornton and Vasilakis (2017) find that some macroeconomic variables are relevant in both the advanced and developing countries, whereas others may have differential impacts across these two groups of countries.

As suggested above, the importance of various determinants of IT may differ with respect to the type of IT regimes. For instance, Carare and Stone (2006) review the global experience with IT by focusing on the factors affecting the evolution between various variants of this regime (“lite”, eclectic, and full-fledged). They find that the level of economic and financial development are the most significant factors for the overall central bank credibility and, thus, for the choice of IT

regimes. Also, they discuss the experience of EMEs and show that the likelihood to move from “lite” to full-fledged IT is predominantly influenced by the level of financial development, government debt, and central bank restrictions on government financing. In their comprehensive study, Samarina and De Haan (2014), too, show that the most important factors behind the adoption of IT differ between soft and full-fledged inflation targeters. Specifically, they find that flexible exchange rate regimes, exchange rate volatility, central bank independence, and external debt affect the probability of adopting soft IT, whereas inflation, output growth, and public debt are the most important factors for adopting full-fledged IT.

#### **4. Conclusions**

The main findings from the empirical literature on the determinants of IT can be summarized as follows: the empirical research generally suggests that larger economies are more likely to choose this monetary regime; also, the level of economic development is associated with higher likelihood of adopting IT; these findings imply that IT may not be a feasible monetary regime for small and/or low-income countries; however, the empirical literature offers diverse results on the effects of economic activity, i.e., it is not clear whether the adoption of IT is more likely in the countries with higher or lower output growth; similarly, the empirical literature does not provide unambiguous answer to the question of whether the countries facing more (less) stable economic conditions (measured by output volatility) are good (bad) candidates to introduce IT; on the other hand, there is strong empirical evidence that the countries experiencing higher past inflation or equivalently, higher money growth are less likely to switch to IT; this finding is consistent with the common requirement that the introduction of IT is conditional on previous disinflation; as for the external macroeconomic conditions, there are ambiguous findings on the importance of current account balance for the adoption of IT; further on, higher interest rates seem to increase the likelihood of introducing inflation rate though this finding need not be true for the long-term interest rates.

Concerning the exchange rate regime, there is a strong consensus that this monetary policy framework requires higher degree of exchange rate flexibility, i.e., currency pegs are not conducive to IT; in addition, there is a consensus that higher degree of central bank instrument-independence is a necessary condition for adopting IT; similarly, the empirical evidence generally supports the



proposition that higher level of financial development is required for introducing IT though this finding does not receive uniform empirical support; finally, the empirical research on the importance of political institutions suggests that democracy, decentralization, and political polarization all increase the likelihood of adopting IT; on the other hand, the literature seems to be completely divided about the importance of trade and financial openness – some studies find that IT is more likely in more open economies, while others reach the opposite conclusion; similarly, the empirical evidence on the role of fiscal discipline is rather mixed, and this is equally true for the importance of both the budget balance and the public debt.

The lack of robust findings in this field is not surprising at all. In fact, both the early literature and the experience of inflation targeters suggest that the link between various macroeconomic and institutional determinants and the probability of adopting IT might be weak, i.e., they are not to be viewed either as strict necessary or sufficient conditions. For instance, many EMEs introduced the IT starting from moderate inflation rates, ranging from 10% to 40% (Mishkin and Schmidt-Hebbel 2002). Similarly, Brazil introduced the IT after the sharp devaluation in 1999, followed by fiscal and political instability (Mishkin 2004b, Mishkin and Savastano 2002). In the late 1990s, Poland, Hungary, and the Czech Republic adopted the IT notwithstanding the large fiscal deficits. In addition, during the initial phase, Poland and Hungary implemented the IT in the presence of exchange-rate bands and with a limited capacity for forecasting inflation (Jonas and Mishkin 2007). Therefore, the proponents of IT argue that the initial institutional and technical conditions as well as the macroeconomic environment are important but not critical for introducing IT, i.e., the lack of these conditions can be remedied after the introduction of this monetary regime (Batini and Laxton 2007, IMF 2006, Mishkin and Schmidt-Hebbel 2007). Given the lack of consensus in the empirical literature on the necessary preconditions for the implementation of IT, Neumann and von Hagen (2002) are probably right when concluding that the choice between IT and other monetary policy strategies is more a question of culture than economic considerations.

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## Appendix

Table 1. The adoption of IT in selected industrialized countries and EMEs

Country	Year of adoption
	Industrialized countries
Australia	1993 (Ardakani et al. 2018, Combes et al. 2014, Fraga et al. 2003, Gerlach and Tiemann 2012, Kose et al. 2018, Levin et al. 2004, Lin 2010, Pétursson 2004, Rose 2007, Samarina and De Haan 2014, Thornton and Vasilakis 2017) 1994 (Ball and Sheridan 2004, Canarella and Miller 2017a, Combes et al. 2014, Corbo et al. 2001, Corbo et al. 2002, Mishkin and Schmidt-Hebbel 2002, Samarina and De Haan 2014, Vega and Winkelried 2005)
Canada	1990 (Gerlach and Tiemann 2012) 1991 (most of the literature) 1992 (Combes et al. 2014) 1994 (Samarina and De Haan 2014, Vega and Winkelried 2005) 2001 (Gerlach and Tiemann 2012)
New Zealand	1989 (Ardakani et al. 2018) 1990 (Batini and Laxton 2007, Canarella and Miller 2017a, Combes et al. 2014, Corbo et al. 2002, Freedman and Laxton 2009, Gerlach and Tiemann 2012, Kose et al. 2018, Leyva 2008, Lin 2010, Mishkin and Schmidt-Hebbel 2002, Pétursson 2004, Rose 2007, Samarina and De Haan 2014) 1991 (Samarina and De Haan 2014, Vega and Winkelried 2005) 2001 (Thornton and Vasilakis 2017)
Sweden	1992 (Gerlach and Tiemann 2012) 1993 (Ardakani et al. 2018, Canarella and Miller 2016, Canarella and Miller 2017a, Combes et al. 2014, Corbo et al. 2002, Kose et al. 2018, Lin 2010, Pétursson 2004, Rose 2007) 1995 (Combes et al. 2014, Thornton and Vasilakis 2017, Vega and Winkelried 2005)
UK	1992 (Ardakani et al. 2018, Canarella and Miller 2017a, Combes et al. 2014, Corbo et al. 2002, Gerlach and Tiemann 2012, Kose et al. 2018, Lin 2010, Pétursson 2004, Rose 2007, Vega and Winkelried 2005) 1993 (Ball and Sheridan 2004, Leyva 2008)



	2000 (Thornton and Vasilakis 2017)
Finland	1993 (Combes et al. 2014, Corbo et al. 2002, Freedman and Laxton 2009, Lin 2010, Mishkin and Schmidt-Hebbel 2002, Rose 2007, Vega and Winkelried 2005) 1994 (Combes et al. 2014)
Spain	1994 (Mishkin and Schmidt-Hebbel 2002, Samarina and De Haan 2014) 1995 (Combes et al. 2014, Corbo et al. 2002, Freedman and Laxton 2009, Lin 2010, Rose 2007, Samarina and De Haan 2014)
<hr/> EMEs <hr/>	
Chile	1990 (Pétursson 2004) 1991 (Canarella and Miller 2016, Canarella and Miller 2017a, Combes et al. 2014, Corbo et al. 2002, Gerlach and Tiemann 2012, Gonçalves and Salles 2008, Lin 2010, Levin et al. 2004, Lucotte 2012, Mishkin and Schmidt-Hebbel 2002, Rose 2007, Samarina and De Haan 2014) 1999 (Ardakani et al. 2018, Batini and Laxton 2007, Combes et al. 2014, Freedman and Laxton 2009, Kose et al. 2018, Lucotte 2012, Samarina and De Haan 2014, Thornton and Vasilakis 2017, Vega and Winkelried, 2005)
Colombia	1995 (Samarina and De Haan 2014) 1999 (most of the literature) 2000 (Gonçalves and Salles 2008, Lucotte 2012, Samarina and De Haan 2014,)
Czech Republic	1997 (Ardakani et al. 2018, Kose et al. 2018) 1998 (most of the literature)
Ghana	1992 (Thornton and Vasilakis 2017) 2002 (Ardakani et al. 2018) 2007 (Combes et al. 2014, Freedman and Laxton 2009, Kose et al. 2018, Samarina and De Haan 2014)
Indonesia	2000 (Gerlach and Tiemann 2012) 2005 (Ardakani et al. 2018, Combes et al. 2014, Kose et al. 2018, Leyva 2008, Samarina and De Haan 2014, Rose 2007, Thornton and Vasilakis 2017)
Israel	1992 (Ardakani et al. 2018, Canarella and Miller 2016, Canarella and Miller 2017a, Combes et al. 2014, Corbo et al. 2002, Gonçalves and Salles 2008, Levin et al. 2004, Leyva 2008, Lin 2010, Lucotte 2012, Pétursson 2004, Rose

	<p>2007, Mishkin and Schmidt-Hebbel 2002, Samarina and De Haan 2014)</p> <p>1997 (Batini and Laxton 2007, Combes et al. 2014, Freedman and Laxton 2009, Kose et al. 2018, Leyva 2008, Lucotte 2012, Samarina and De Haan 2014, Vega and Winkelried, 2005)</p> <p>2001 (Gerlach and Tiemann 2012, Thornton and Vasilakis 2017)</p>
Mexico	<p>1995 (Samarina and De Haan 2014, Thornton and Vasilakis 2017)</p> <p>1999 (Canarella and Miller 2016, Canarella and Miller 2017a, Combes et al. 2014, Corbo et al. 2002, Gonçalves and Salles 2008, Levin et al 2004, Lin 2010, Mishkin and Schmidt-Hebbel 2002, Pétursson 2004, Rose 2007, Vega and Winkelried, 2005)</p> <p>2001 (Ardakani et al. 2018, Combes et al. 2014, Freedman and Laxton 2009, Kose et al. 2018, Lucotte 2012, Samarina and De Haan 2014)</p> <p>2002 (Batini and Laxton 2007)</p>
Peru	<p>1989 (Thornton and Vasilakis 2017)</p> <p>1994 (Corbo et al. 2002, Gonçalves and Salles 2008, Mishkin and Schmidt-Hebbel 2002, Leyva 2008, Samarina and De Haan 2014)</p> <p>2002 (Ardakani et al. 2018, Batini and Laxton 2007, Combes et al. 2014, Levin et al. 2004, Lin 2010, Pétursson 2004, Rose 2007, Samarina and De Haan 2014, Vega and Winkelried 2005)</p>
Philippines	<p>1995 (Samarina and De Haan 2014)</p> <p>2002 (most of the literature)</p>
Poland	<p>1998 (Ardakani et al. 2018, Combes et al. 2014, Corbo et al. 2002, Freedman and Laxton 2009, Kose et al. 2018, Levin et al. 2004, Lin 2010, Pétursson 2004, Rose 2007)</p> <p>1999 (Batini and Laxton 2007, Gonçalves and Salles 2008, Leyva 2008, Samarina and De Haan 2014)</p>
South Africa	<p>2000 (Ardakani et al. 2018, Canarella and Miller 2016, Canarella and Miller 2017a, Combes et al. 2014, Corbo et al. 2002, Gerlach and Tillmann 2012, Gonçalves and Salles 2008, Levin et al. 2004, Leyva 2008, Lin 2010, Pétursson 2004, Rose 2007, Samarina and De Haan 2014)</p> <p>2002 (Thornton and Vasilakis 2017)</p> <p>2005 (Combes et al. 2014, Leyva 2008)</p>

South Korea	1997 (Thornton and Vasilakis 2017) 1998 (Ardakani et al. 2018, Canarella and Miller 2016, Canarella and Miller 2017a, Combes et al. 2014, Corbo et al. 2002, Gonçalves and Salles 2008, Levin et al. 2004, Leyva 2008, Lin 2010, Pétursson 2004, Samarina and De Haan 2014) 1999 (Gerlach and Tillmann 2012) 2001 (Freedman and Laxton 2009, Kose et al. 2018, Samarina and De Haan 2014)
Thailand	2000 (most of the literature) 2006 (Thornton and Vasilakis 2017)
Turkey	2000 (Thornton and Vasilakis 2017) 2002 (Samarina and De Haan 2014) 2006 (most of the literature)

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Author's compilation from various sources: Ardakani et al. (2018), Batini and Laxton (2007), Ball and Sheridan (2004), Bernanke and Mishkin (1997), Bernanke et al. (1999), Canarella and Miller (2016), Canarella and Miller (2017a), Combes et al. 2014, Corbo et al. (2002), de Mendonca and de Guimarães e Souza (2012), Freedman and Laxton (2009), Gerlach and Tillmann (2012), Gonçalves and Salles (2008), Kose et al. (2018), Levin et al. (2004), Leyva (2008), Lin (2010), Lucotte (2012), Mishkin and Schmidt-Hebbel (2002), Pétursson (2004), Rose (2007), Samarina and De Haan (2014), Thornton and Vasilakis (2017), and Vega and Winkelried (2005).

Table 2A. Selected empirical studies on the determinants of adopting IT

Study	Data and methodology	Findings
Ardakani et al. (2018)	98 advanced and developing countries during 1998-2013; binary response model	GDP growth (-) in all samples, inflation (-) in all samples, money growth (-) in all samples, fixed exchange rate (-) in the whole sample and in developing countries, central bank's assets (+) in the whole sample and in advanced countries, and (-) in developing countries, financial development (-) in all samples.
Arsić et al. (2022)	26 EMEs during 1997–2019; probit model	inflation (-), current account balance (-), fixed exchange rate regime (-), trade openness (-), money growth (-), population size (+), public debt (+).
Carare and Stone (2006)	Advanced countries and EMEs; cross-section regression and ordered probit model	GDP per capita (+) in the whole sample, and (x) in EMEs, inflation (x), CBI (x) in the whole sample, and (-) in EMEs, financial development (+), public debt (x) in the whole sample, and (-) in EMEs, fiscal balance (x).
de Mendonça and de Guimarães e Souza (2012)	180 advanced and developing countries during 1990-2007; probit model	GDP per capita (+), monetization (+), financial openness (+), fiscal balance (-), inflation (-), fixed exchange rate (-), trade openness (x).
Fouejieu (2017)	26 EMEs during 2000-2010; probit model	inflation (-), real GDP (-), GDP growth (x), fixed exchange rate (-), trade openness (x), long-term interest rate (x), short-term interest rate (+), CBI (+).

Fry-McKibbin and Wang (2014)	31 advanced countries and 60 EMEs during 2007-2012; logit model	inflation (+) in advanced countries, and (-) in EMEs, fixed exchange rates (-) in advanced countries, trade openness (x) in advanced countries, openness (-) in EMEs, fixed exchange rates (-) in EMEs, money growth (x) in both samples.
Hu (2006)	66 advanced and developing countries during 1980-2000; logit model	output growth (-), inflation (-), real interest rates (+), external debt (-), fiscal balance (+), floating exchange rate regime (x), CBI (+), pressure on exchange rates (+), growth variability (x), output gap (x), nominal int rate (x), nominal and real exchange variability (x), current account (x), terms of trade (x), trade openness (x), financial depth (x), central bank autonomy (x).
Ismailov et al. (2016)	82 advanced and developing countries in 2010; probit model and multivariate logit model	floating exchange rate (+) in the whole sample, (+) in advanced countries, and (x) in developing countries, public debt (-) in the whole sample, (x) in advanced countries, and (-) in developing countries, inflation (x) in the whole sample, (+) in advanced countries, and (x) in developing countries, political risk (x) in all samples.
Leyva (2008)	28 advanced countries and EMEs during 1975-2005; logit and probit models	inflation (-), financial development (+), GDP per capita (+), trade openness (+), fiscal balance (x).

Lin (2010)	74 advanced countries and EMEs during 1985-2005; probit model	fiscal balance (+), fixed exchange-rate regime (-), inflation (-), money growth (-), per capita GDP growth (x), trade openness (-) in developing countries.
Lin and Ye (2007)	22 advanced countries during 1985-1999; probit model	inflation rate (-), money growth (-), CBI (+), fixed exchange rate regime (-), fiscal balance (x), per capita GDP growth (x), trade openness (x).
Lin and Ye (2009)	52 developing countries during 1985-2005; probit model	inflation (-) money growth (-) fixed exchange rate regime (-) trade openness (-) real GDP per capita growth (x) debt/GDP ratio (x) CBI (x).
Lucotte (2010)	30 EMEs during 1986-2005; probit model	CBI (+), inflation (-), government and overall political stability (+), political polarization (+), number of veto players (+), decentralization (+), GDP per capita (+), exchange rate flexibility (+), trade openness (+), financial development (x).
Lucotte (2012)	30 EMEs during 1980-2004; probit model	GDP growth (+), flexible exchange rate (+), CBI (+), inflation (-), trade openness (x), financial development (x), number of inflation targeters (+).
Minea et al. (2021)	53 developing countries during 1984-2007; probit model	inflation (-), tax revenue (-), trade openness (-), GDP per capita (+), exchange rate flexibility (+), constraints on the executive (+), institutional quality (-),

		primary schooling (+).
Minea and Tapsoba (2014)	84 advanced and developing countries during 1985-2007; probit model	inflation (-), trade openness (-) CBI (+), debt/GDP ratio (-), fixed exchange rate (-), fiscal rules (+).
Mishkin and Schmidt-Hebbel (2002)	27 advanced and developing countries during 1990s; probit model	inflation (+), trade openness (+), instrument CBI (+), goal-CBI (-), legal CBI (x), money targets (-), fiscal balance (x).
Mukherjee and Singer (2008)	49 OECD and non-OECD countries during 1987-2003; probit model	GDP growth variability (+), floating exchange rate (+), real interest rate (+), inflation (+), current account balance (+), right-wing government (+), central bank without bank regulatory authority (+).
Pontines (2013)	74 advanced and developing countries during 1985-2005; treatment effects regression	inflation (-), fiscal surplus (-), money growth (-), exchange rate flexibility (+), GDP growth (x).
Rose (2014)	170 advanced and developing countries during 2007-2012; multinomial logit model	country size (+), democracy (+), trade openness (x), financial openness (x).
Samarina and De Haan (2014)	60 OECD and non-OECD countries during 1985-2008; probit model and multinomial probit model	inflation (-) in the whole sample and in OECD countries, and (x) in non-OECD countries, GDP growth (-) in the whole sample and in OECD countries, and (x) in non-OECD countries, output volatility (+) in the whole sample and in OECD countries, and (x) in non-OECD countries, flexible exchange rate (+), exchange rate volatility (+), CBI (x) in the whole sample and in OECD countries, and (+) in non-OECD countries, fiscal balance (x),

		public debt (-) in the whole sample and in OECD countries, external debt (x), financial development (-) in the whole sample and in OECD countries, trade openness (x), financial stability (x), financial structure (x).
Samarina and Sturm (2014)	60 advanced and developing countries during 1985-2008; random-effects probit model	inflation (-) output volatility (-) flexible exchange rate (+) exchange rate volatility (+) government debt (x) financial development (+).
Samarina et al. (2014)	85 advanced and developing countries during 1985-2011; logit model	advanced countries: GDP per capita (-) in advanced countries, and (+) in developing countries, financial development (-) flexible exchange rates (+) in both samples, trade openness (+) in advanced countries, and (-) in developing countries, inflation (-) in both samples, financial openness (x) in advanced countries, and (+) in developing countries, public debt (x) in advanced countries, and (-) in developing countries, money growth (-) in developing countries.
Stojanovikj and Petrevski (2019)	44 EMEs during 1990-2017; logit model	inflation (x), inflation volatility (-), growth (x), GDP growth volatility (-), financial development (+), CBI (+), capital mobility (+), public debt (-).
Thornton and Vasilakis (2017)	90 advanced and developing countries during 1979-2014; probit model	inflation (-) in all samples, GDP per capita growth (+) in the whole sample and in developing



		countries, and (x) in advanced countries, public debt (-) in all samples, trade openness (+) in the whole sample, (-) in advanced and in developing countries, financial openness (+) in the whole and in developing countries, and (x) in advanced countries, exchange rate flexibility (+) in all samples, financial development (+) in all samples, financial crises (-) in developing countries.
Vega and Winkelried (2005)	91 advanced and developing countries during 1990-2004, logit model	investment/GDP (+) fiscal balance (x) inflation (+) inflation volatility (-) monetization (+) trade openness (-) floating exchange regime (-).
Wang (2016)	16 EMEs during 1990-2010, logit model	population size (+), inflation (x) GDP growth (x) trade openness (x) debt/GDP ratio(x) IT-neighbor (x) money growth (x).
Yamada (2013)	121 EMEs and developing countries during 1995-2007; multinomial logit model;	GDP level (+), output gap (x), time trend (+), country size (+), changes in terms of trade (+), money growth (-), trade openness (x), foreign reserve (x).

Note: “+” and “-“ indicate higher and lower likelihood to adopt IT, respectively, while “x” indicated that the factor is statistically insignificant or economically negligible.

Table 2B. Summary of the main findings on the determinants of adopting inflation targeting

Determinant	Findings	Sample
GDP / GDP per capita	Carare and Stone (2006) (+) Carare and Stone (2006) (x) de Mendonça and de Guimarães e Souza (2012) (+) Fouejieu (2017) ( - ) Hu (2006) (x) Ismailov et al. (2016) (x) Leyva (2008) (+) Lucotte (2010) (+) Minea et al. (2021) (+) Samarina et al. (2014) (-) Samarina et al. (2014) (+) Yamada (2013) (+)	Mixed sample EMEs Mixed sample  EMEs Mixed sample Mixed sample Mixed sample EMEs Developing countries Advanced countries Developing countries Developing countries
GDP growth	Ardakani et al. (2018) (-) Ardakani et al. (2018) (-) Ardakani et al. (2018) (-) Fouejieu (2017) (x) Hu (2006) (-) Lin (2010) (x) Lin and Ye (2007) (x) Lin and Ye (2009) (x) Lucotte (2012) (+) Pontines (2013) (x) Samarina and De Haan (2014) (x) Thornton and Vasilakis (2017) (+) Thornton and Vasilakis (2017) (x) Thornton and Vasilakis (2017) (+) Wang (2016) CEE (x)	Mixed sample Advanced countries Developing countries EMEs Mixed sample Mixed sample Advanced countries Developing countries EMEs Mixed sample Mixed sample Mixed sample Advanced countries Developing countries EMEs
GDP variability	Hu (2006) (x) Mukherjee and Singer (2008) (+) Samarina and De Haan (2014) (+) Samarina and De Haan (2014) (+) Samarina and De Haan (2014) (x) Samarina and Sturm (2014) (-) Stojanovikj and Petrevski (2019) (-)	Mixed sample Mixed sample Mixed sample Advanced countries Developing countries Mixed sample EMEs
Inflation	Ardakani et al. (2018) (-) Arsić et al (2022) (-) Fry-McKibbin and Wang (2014) (+) Fry-McKibbin and Wang (2014) (-) Hu (2006) (-) Lin (2010) (-) Lin and Ye (2007) (-) Lin and Ye (2009) (-) Minea et al. (2021) (-)	Mixed sample EMEs Advanced countries EMEs Mixed sample Mixed sample Advanced countries Developing countries Developing countries

	Minea and Tapsoba (2014) (-) Pontines (2013) (-) Samarina and De Haan (2014) (-) Samarina and De Haan (2014) (-) Samarina and De Haan (2014) (x) Samarina and Sturm (2014) (-) Samarina et al. (2014) (x) Samarina et al. (2014) (-) Thornton and Vasilakis (2017) (-) Vega and Winkelried (2005) (+) Wang (2016) (x)	Mixed sample Mixed sample Mixed sample Advanced countries Developing countries Mixed sample Advanced countries Developing countries Mixed sample Mixed sample Mixed sample EMEs
Money growth	Ardakani et al. (2018) (-) Ardakani et al. (2018) (-) Ardakani et al. (2018) (-) Arsić et al (2022) (-) Fry-McKibbin and Wang (2014) (x) Lin (2010) (-) Lin and Ye (2007) (-) Lin and Ye (2009) (-) Pontines (2013) (-) Samarina et al. (2014) (-) Wang (2016) (x) Yamada (2013) (-)	Mixed sample Advanced countries Developing countries EMEs Mixed sample Mixed sample Advanced countries Developing countries Mixed sample Developing countries EMEs Developing countries
Real interest rates	Hu (2006) (+) Mukherjee and Singer (2008) (+)	Mixed sample Mixed sample
Long-term interest rates	Fouejieu (2017) (x)	EMEs
Short-term interest rates	Fouejieu (2017) (+) Hu (2006) (x)	EMEs Mixed sample
Fixed exchange rates	Ardakani et al. (2018) (-) Ardakani et al. (2018) (x) Ardakani et al. (2018) (-) Arsić et al (2022) (-) de Mendonça and de Guimarães e Souza (2012) (-) Fouejieu (2017) (-) Fry-McKibbin and Wang (2014) (-) Lin (2010) (-) Lin and Ye (2007) (-) Lin and Ye (2009) (-) Minea and Tapsoba (2014) (-)	Mixed sample Advanced countries Developing countries EMEs Mixed sample EMEs Mixed sample Mixed sample Advanced countries Developing countries Mixed sample
Exchange rate flexibility / Floating exchange rates	Hu (2006) (x) Ismailov et al. (2016) (+) Ismailov et al. (2016) (+) Ismailov et al. (2016) (x) Lucotte (2010) (+) Lucotte (2012) (+)	Mixed sample Mixed sample High-income countries Low-income countries EMEs EMEs

	Minea et al. (2021) (+) Mukherjee and Singer (2008) (+) Pontines (2013) (+) Samarina and De Haan (2014) (+) Samarina and Sturm (2014) (-) Samarina et al. (2014) (+) Samarina et al. (2014) (+) Thornton and Vasilakis (2017) (+) Vega and Winkelried (2005) (-)	Developing countries Mixed sample Mixed sample Mixed sample Mixed sample Advanced countries Developing countries Mixed sample Mixed sample
Exchange rate volatility	Samarina and De Haan (2014) (+) Samarina and Sturm (2014) (+) Hu (2006) (x)	Mixed sample Mixed sample Mixed sample
Trade openness	Arsić et al (2022) (-) de Mendonça and de Guimarães e Souza (2012) (x) Fouejieu (2017) (x) Fry-McKibbin and Wang (2014) (x) Fry-McKibbin and Wang (2014) (-) Hu (2006) (x) Leyva (2008) (+) Lucotte (2010) (+) Lucotte (2012) (x) Lin (2010) (-) Lin (2010) (x) Lin and Ye (2007) (x) Lin and Ye (2009) (-) Minea et al. (2021) (-) Minea and Tapsoba (2014) (-) Mishkin and Schmidt-Hebbel (2002) (+) Rose (2014) (x) Samarina and De Haan (2014) (x) Samarina et al. (2014) (+) Samarina et al. (2014) (-) Thornton and Vasilakis (2017) (+) Thornton and Vasilakis (2017) (-) Thornton and Vasilakis (2017) (-) Vega and Winkelried (2005) (-) Wang (2016) (x) Yamada (2013) (x)	EMEs Mixed sample  EMEs Advanced countries EMEs Mixed sample Mixed sample EMEs EMEs Developing countries Mixed sample Advanced countries Developing countries Developing countries Mixed sample Mixed sample Mixed sample Advanced countries Developing countries Mixed sample Advanced countries Developing countries Mixed sample EMEs Developing countries
Financial openness	de Mendonça and de Guimarães e Souza (2012) (+) Rose (2014) (x) Samarina and De Haan (2014) (-) Samarina et al. (2014) (x) Samarina et al. (2014) (+) Thornton and Vasilakis (2017) (+)	Mixed sample  Mixed sample Mixed sample Advanced countries Developing countries Mixed sample

	Thornton and Vasilakis (2017) (+)	Developing countries
Current account balance	Arsić et al (2022) (-) Hu (2006) (x) Mukherjee and Singer (2008) (+)	EMEs Mixed sample Mixed sample
Central bank independence	Fouejieu (2017) (+) Hu (2006) (x) Lin and Ye (2007) (+) Lin and Ye (2009) (x) Lucotte (2010) (+) Lucotte (2012) (+) Minea and Tapsoba (2014) (+)	EMEs Mixed sample Advanced countries Developing countries EMEs EMEs Mixed sample
Central bank instrument independence	Mishkin and Schmidt-Hebbel (2002) (+) Samarina and De Haan (2014) (x) Samarina and De Haan (2014) (x) Samarina and De Haan (2014) (+)	Mixed sample Mixed sample Advanced countries Developing countries
Central bank goal independence	Mishkin and Schmidt-Hebbel (2002) (-)	Mixed sample
Legal central bank independence	Mishkin and Schmidt-Hebbel (2002) (x)	Mixed sample
Central bank without bank regulatory authority	Mukherjee and Singer (2008) (+)	Mixed sample
Central bank restrictions on government lending	Carare and Stone (2006) (x) Carare and Stone (2006) (-)	Mixed sample EMEs
Monetary targets	Mishkin and Schmidt-Hebbel (2002) (-)	Mixed sample
Fiscal balance	Carare and Stone (2006) (x) de Mendonça and de Guimarães e Souza (2012) (-) Hu (2006) (+) Leyva (2008) (x) Lin (2010) (+) Lin and Ye (2007) (x) Mishkin and Schmidt-Hebbel (2002) (x) Pontines (2013) (-) Samarina and De Haan (2014) (x) Vega and Winkelried (2005) (x)	Mixed sample Mixed sample Mixed sample Mixed sample Mixed sample Advanced countries Mixed sample Mixed sample Mixed sample Mixed sample
Government debt	Arsić et al (2022) (+) Carare and Stone (2006) (x) Carare and Stone (2006) (x) Ismailov et al. (2016) (-) Ismailov et al. (2016) (x) Ismailov et al. (2016) (-) Lin and Ye (2009) (x) Minea and Tapsoba (2014) (-) Samarina and De Haan (2014) (-) Samarina and De Haan (2014) (-)	EMEs Mixed sample EMEs Mixed sample High-income countries Low-income countries Developing countries Mixed sample Mixed sample Advanced countries

	Samarina and De Haan (2014) (x) Samarina et al. (2014) (x) Samarina et al. (2014) (-) Samarina and Sturm (2014) (x) Thornton and Vasilakis (2017) (-) Wang (2016) (x)	Developing countries Advanced countries Developing countries Mixed sample Mixed sample EMEs
External debt	Samarina and De Haan (2014) (x) Hu (2006) (-)	Mixed sample Mixed sample
Tax revenue	Minea et al. (2021) (-)	Developing countries
Central bank's assets	Ardakani et al. (2018) (+) Ardakani et al. (2018) (+) Ardakani et al. (2018) (-)	Mixed sample Advanced countries Developing countries
Foreign reserve	Yamada (2013) (x)	Developing countries
Financial development	Ardakani et al. (2018) (-) Ardakani et al. (2018) (-) Ardakani et al. (2018) (-) Carare and Stone (2006) (+) de Mendonça and de Guimarães e Souza (2012) (+) Hu (2006) (x) Leyva (2008) (+) Lucotte (2010) (x) Lucotte (2012) (x) Samarina and De Haan (2014) (-) Samarina and De Haan (2014) (-) Samarina and De Haan (2014) (x) Samarina and Sturm (2014) (+) Samarina et al. (2014) (+) Thornton and Vasilakis (2017) (+) Vega and Winkelried (2005) (+)	Mixed sample Advanced countries Developing countries Mixed sample Mixed sample  Mixed sample Mixed sample EMEs EMEs Mixed sample Advanced countries Developing countries Mixed sample Advanced countries Mixed sample Mixed sample
Financial structure	Samarina and De Haan (2014) (x)	Mixed sample
Financial crises/ Financial instability	Samarina and De Haan (2014) (x) Thornton and Vasilakis (2017) (x) Thornton and Vasilakis (2017) (-)	Mixed sample Advanced countries Developing countries
Institutional quality	Minea et al. (2021) (-)	Developing countries
Constraints on the executive	Minea et al. (2021) (+)	Developing countries
Right-wing government	Mukherjee and Singer (2008) (+)	Mixed sample
Democracy	Rose (2014) (+)	Mixed sample
Political risk	Ismailov et al. (2016) (x)	Mixed sample
Country size / population size	Arsić et al (2022) (+) Rose (2014) (+) Wang (2016) (+) Yamada (2013) (+)	EMEs Mixed sample EMEs Developing countries
Government and overall political stability	Lucotte (2010) (+)	EMEs

Political polarization	Lucotte (2010) (+)	EMEs
The number of veto players	Lucotte (2010) (+)	EMEs
Federalism / Decentralization	Lucotte (2010) (+)	EMEs
Number of inflation targeters / neighboring inflation targeters	Lucotte (2012) (+) Wang (2016) (x) Yamada (2013) (+)	EMEs EMEs Developing countries
Primary schooling	Minea et al. (2021) (+)	Developing countries

Note: “+” and “-” indicate higher and lower likelihood to adopt IT, respectively, while “x” indicates that the factor is either statistically insignificant or economically negligible.